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ON THE NOMOLOGICAL RELATIONS OF CULTURE AND MARKET
ORIENTATION: THE CASE OF THE GERMAN AND SOUTH AFRICAN
AUTOMOTIVE INDUSTRIES

Dissertation submitted to the University of Cape Town Graduate School of Business in
fulfilment of the requirements for the degree of Doctor of Philosophy

Tobias Gress

Supervisor

Professor Steven Michael Burgess



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

June, 2009

ABSTRACT

The current research examines the effects of cultural institutions on the relationships of market orientation and its theorized antecedents. Market orientation (MO) is one of the most prominent topics in scholarly marketing research. According to recent meta-analyses, more than 200 studies situated in diverse industries confirm the theorized relationships of MO with presumed MO antecedents and consequences (Cano, Carrillat, & Jaramillo, 2004; Deshpandé & Farley, 2004; Kirca, Jayachandran, & Bearden, 2005). Most of this important stream of research is situated in high-income, Western countries (HICs). This suggests a significant limitation because institutional context is an important influence on MO and cultural, socioeconomic, and regulative institutions in emerging markets (EMs) and high-income, Western countries differ considerably (Burgess & Steenkamp, 2006).

Differences in EM and HIC cultural institutions (e.g. Hofstede, 2001; Schwartz, 2006) appear to be especially relevant to MO theory. For example, in the most comprehensive meta-analysis of the MO literature, Kirca et al. (2005) find that Hofstede's (2001) uncertainty avoidance and power distance affect the relationships of MO and performance. Deshpandé and Farley (2004) suggest that individualism and collectivism affect the relationships between MO and its antecedents by shaping preferences for interpersonal relationships with others inside and outside of the company. Burgess and Nyajeka (2005) theorize that high cultural embeddedness and hierarchy in EMs present boundary conditions for expected antecedent relationships with MO (reward systems, centralization, formalization, and interdepartmental conflict). It is in this vein that Kirca et al. (2005, p.38) call for research to improve our "understanding of how the impact of the antecedents of market orientation vary across different business and cultural contexts."

The current research answers this call by investigating the moderating effects of culture on the relationships of MO and its theorized antecedents in the German and South

African automotive industries. Germany (n=190) and South Africa (n=171) are important manufacturers and exporters of automotive products.

MO researchers traditionally use value priorities to operationalize culture. Values are conceptualized as generalized beliefs that refer to trans-situational goals in life (Schwartz, Melech, Lehmann, Burgess, & Harris, 2001). However, not all behaviour is goal-oriented (e.g. Locke & Latham, 2004). This suggests another opportunity to extend prior research. I address this opportunity by operationalizing culture using a new culture measure (viz., social axioms) and motivating hypothesized effects of culture on the relationships of presumed antecedents and MO using the MO and social axioms literatures.

Social axioms are the subject of recent programmatic research in more than 40 countries, which attempts to expand the dimensional map of culture (Leung, Bhagat, Buchan, Erez, & Gibson, 2005). They refer to generalized expectancies about how the world functions (Bond, Leung, Au, Tong, Carrasquel, et al., 2004; cf. Rotter, 1966). As trans-situational beliefs, social axioms direct social behaviours across situations, actors, targets, and time by providing individual assessments of social context and its constraints on behavioural choices (Bond, Leung, Au, Tong, & Chemonges-Nielson, 2004; Leung, Bond, Carrasquel, Muñoz, Hernández, et al., 2002). Hierarchical regression analyses show that social axioms add moderate predictive power over and above that provided by values to vocational choices, methods of conflict resolution, and coping styles. Given the importance of value priorities as a measure of culture in MO research, I also collect values data and use it to provide valuable information about the nomological relationships of social axioms and market orientation.

After consultation with relevant industry associations in both countries, I administered an online survey in German (Germany) and English (South Africa). The instrument included the 30-item version of the Social Axiom Study (Bond, Leung, Au, Tong, Carrasquel, et al., 2004) and the 29-item Portrait Value Questionnaire (Schwartz et al., 2001). I measured MO

and its antecedents and consequences using scales developed by Ruekert (1992) and Jaworski and Kohli (1993).

Composite reliability, convergent validity, discriminant validity and nomological validity were assessed using the confirmatory factor analysis approach (cf. Steenkamp & van Trijp, 1991). The analysis followed the two-step structural equation modelling (SEM) approach (Anderson & Gerbing, 1988). I conducted the analyses on item covariances using full information maximum likelihood estimation in LISREL 8.8. The results suggest that the hypothesized model exhibits an acceptable fit to the data in Germany ($\chi^2/df=1.66$, RMSEA=0.053, ECVI=12.45, CFI=0.85, and TLI=0.84) and South Africa ($\chi^2/df=1.49$, RMSEA=0.047, ECVI=12.5, CFI=0.92, and TLI=0.91). The circular relationships of the values scale preclude confirmatory factor analysis. Instead, I used the configural verification approach recommended by Schwartz et al. (2001). Similarity structure analysis indicates an acceptable fit to the data (stress = 0.126 Germany; stress = 0.155 South Africa) and the four value domains emerge clearly despite the relatively small sample size. The nomological relationships of social axioms and value priorities are consistent with Leung, Au, Huang, Kurman, Niit, T. and Niit, K. (2007).

I used latent variable Partial Least Squares (PLS) analysis to assess the hypothesized structural relations. PLS is more appropriate than covariance structure modelling due to the complexity of the models and sample size. The results confirm the theorized antecedent relationships (centralization, interdepartmental conflict, reward systems, and willingness to take risks) with MO and the positive relationships of MO and business performance. The results suggest that the cultural institutions present a boundary condition on the theorized relationships of the antecedents and MO. Social axioms (social cynicism, social flexibility, reward for application, and religiosity) moderate the relationships of MO and its antecedents in meaningful and theoretically predictable ways in Germany and South Africa.

The contribution of the research is two-fold. *Conceptually*, the current research extends prior work by using a new culture measure not previously employed in MO research. Prior MO research has relied on operational definitions of culture that emphasise goal-direction. Although values remain a most important culture measure, not all behaviour is goal-directed. Operationalizing culture using social axioms in the current research facilitates the assessment of new culture dimensions that are not goal-directed. As generalized expectancies about how the world works, social axioms direct behaviour by providing information about appropriate behavioural responses to social context that have not been previously researched. These generalized expectancies present boundary conditions on MO theory. Studying these effects on a cross-cultural sample including both a HIC and an EM contributes to the external validity and generalizability of the findings (cf. Burgess & Steenkamp, 2006; Hult, Ketchen, Jr, Griffith, Finnegan, Conzalez-Padron, et al., 2008). *Practically*, social axioms are easily measured and provide diagnostic information that managers and operational staff can easily relate to marketing practice and intra-organizational behaviour and use to improve MO and performance. One way to do this could be the development of strategies in order to position employees within an organizational structure, fostering positive effects that their cultural characteristics might have on the market orientation. Similarly, positioning people with a certain cultural profile in areas where their social axiom levels could negatively affect the market orientation should be avoided. Incorporating this knowledge about the effects of social axioms on the antecedent-market orientation link could already take place at a human resources management level by profiling applicants prior to hiring. Alternatively, managers and workers can be trained to recognize the social axioms they endorse and how their beliefs affect the company's market orientation and ultimately the success of their company.

ACKNOWLEDGEMENTS

It was at the end of 2005 when I convinced Prof. Steven Burgess to take me on as one of his students. A challenging project was waiting to be accomplished and I was determined to finish it in fulfilment of the requirements for a PhD at the Graduate School of Business (GSB) of the University of Cape Town (UCT). The PhD project has now come to an end. The requested work has been delivered and the moment has come to say goodbye.

Many individuals and organizations have greatly helped me during the past three and a half years, from the first thoughts on a research proposal to the completion of this doctoral thesis. I would like to use these few lines here to express my gratitude.

Thanks to my supervisor and mentor Steve, who raised my interest in cultural diversity and its impact on business matters. In your role as a supervisor, you were critical but fair, which I appreciated a lot. I am very grateful for your academic guidance, as well as for providing me with extraordinarily valuable insights and suggestions. Despite auguring a ten percent chance of success due to my spatial separation from the University during most of the project time, you took me on as one of your students. Thank you for believing in me and my work.

I want to thank Petra for her love, sacrifice, and kind indulgence. I credit you for inspiring me and helping me during both the uplifting moments and the difficult times over the past few years. I appreciated your constant support and understanding tremendously.

Without doubt, financial support was also of significant importance, especially as my research project required me to travel several times to South Africa. I am, therefore, very grateful to the University of Cape Town (UCT) who granted me an International Postgraduate Research Scholarship for the period of three years.

The completion of this study was only possible with the support of a number of industry organizations such as the VDA, NAACAM, NAAMSA and AIEC. For my empirical research

project, the assistance of the companies and the interest of board members, CEOs, and other managers to participate in the project was absolutely critical. I am very appreciative of the substantial amount of working hours that the sample companies were willing to invest into the public good of academic research.

I would also like to thank my statistical consultant Greg, who gently introduced me to the concept of SEM and who was a great sparring partner to discuss statistical issues. Thank you, Gisela, for accompanying me throughout my whole postgraduate studies as a friend and proofreader. With your help my work started to sound more English. I owe special debt to Richard for hosting me as I conducted research far from home.

Last but not least, I want to thank my parents for their love, unshakable confidence in me, and financial support throughout the many years of my education.

The PhD trajectory has been a wonderful learning experience, which, at times, pushed me to the limits of my capacity. The support of the people mentioned above made me succeed.

University of Cape Town

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GLOSSARY

ABPM	Accountable Business Performance Measurement
ADF	Asymptotic Distribution-free
AIEC	Automotive Export Industry Council
AoMo	Antecedents of Market Orientation
BBBEE	Broad Based Black Economic Empowerment
BP	Business Performance
bfai	Bundesagentur für Aussenwirtschaft (German Office for Foreign Trade)
CFA	Confirmatory Factor Analysis
dti	Department Trade and Industry of the Republic of South Africa
EM	Emerging Market
EO	Original Equipment (e.g. automobile industry)
ERS	Extreme Response Style
ESS	The European Social Survey
GDP	Gross Domestic Product
HICs	High Income Countries
IB	International Business
I-C	Individualism-Collectivism
JIT	Just in Time
LIC	Low Income Country
LMCs	Lower Middle Income Countries
LOV	List of Values
MCAR	Missing Completely at Random
MIDP	Motor Industry Development Programme
ML	Maximum Likelihood
MO	Market Orientation
MSOP	Multiple Stakeholder Orientation Profile
NAACAM	National Association of Automotive Component & Allied Manufacturers
NAAMSA	National Association of Automobile Manufacturers South Africa

OEM	Original Equipment Manufacturer (motor vehicle manufacturer)
PLS	(Latent Variable) Partial Least Squares
PPP	Purchasing Power Parity
PVQ	Portrait Value Questionnaire
R&D	Research and Development
RMO	Relationship Marketing Orientation
ROI	Return on Investment
ROS	Return on Sales
RVS	Rokeach Value Survey
SAS	Social Axiom Survey
SBU	Strategic Business Unit
SCA	Sustainable Competitive Advantage
SIC	Standard Industrial Classification
SSA	Smallest Space Analyses
SSVS	Short Schwartz's Value Survey
SVS	Schwartz Value Survey
TQM	Total Quality Management
UMC	Upper Middle Income Country
VDA	Verband der Automobilindustrie
VDMA	Verband Deutscher Maschinen- und Anlagenbauer e.V.
VDW	Verein Deutscher Werkzeugmaschinenfabriken e.V.
WLS	Weighted Least Squares
ZDK	Zentralverband des Deutschen Kraftfahrzeuggewerbe e.V.

1 INTRODUCTION

Traditionally, international business (IB) research has focused on economic and legal issues or forms and structures of organizations. During the last 20 years, however, a new line of research has become more and more important: culture (Leung, Bhagat, Buchan, Erez, & Gibson, 2005). The classic work of Hofstede (1980a) is central to this development. His theory is based on a number of cultural dimensions, namely individualism-collectivism, power distance, uncertainty avoidance, masculinity-femininity, and short-versus long-term orientation. Culture has an impact on various business activities (Leung et al., 2005), and can be “broadly defined as values, beliefs, norms, and behavioural patterns of a national group” (Leung et al., 2005, p.357). The impact of culture on business has been reviewed by Boyacigiller and Adler (1991) as well as Earley and Gibson (2002). Leung et al. (2005, p.368) argue that “there are very few instances where culture does not matter at all.” In other words, the question is not whether culture matters but rather how and when it does (Leung, Su, & Morris, 2001a). The validity of Hofstede’s theory for measuring cultural dimensions seems to be controversial (Leung et al., 2005), since it was developed using data from a study of only one business. Researchers also argue that measuring culture using only Hofstede’s values approach limits results, since culture should not be condensed to values only (Triandis, Bontempa, Leung, & Hui, 1990).

Schwartz (1992, 1994a) developed a more recent explanation of the nature of culture. He conducted a large multinational study to develop a model identifying value types at the individual and cultural level. Schwartz (1992) obtained ten distinct individual level values that include all other values previously recognized in culture studies around the world. These are based on three universal requirements of the human condition: (1) needs of individuals as biological organisms, (2) requisites of coordinated social interaction, and (3) survival and

welfare needs of groups. Schwartz's model consists of values that express both motivations for means and ends and includes the value types benevolence, self-direction, universalism, security, conformity, achievement, hedonism, stimulation, tradition and power.

A pioneering approach to operationalizing culture has become prominent during the last years. Values clearly being the most influential perspective to defining culture and explaining differences in social behaviour, Leung, Bond, De Carrasquel, Muñoz, Hernández, et al. (2002) used a different approach to explain and measure culture. The research group broadened the conceptual tools that are applied in cross-cultural analysis by using general beliefs or social axioms to identify cultural differences. Due to their functionality and the universality of the problems people have to cope with to survive (Schwartz, 1992), social axioms are assumed to be pan-cultural (Leung et al., 2002). Social axioms can be formally defined as "generalized beliefs about oneself, the social and physical environment, or the spiritual world [that] are in the form of an assertion about the relationship between two entities or concepts" (Leung et al., 2002, p.289). Five individual social axiom dimensions have been identified that are universal in nature and show variations in their relative endorsement amongst different cultures (Singelis, Her, Aaker, Bhawuk, Gabrenya et al., 2003): *control by fate*, *reward for application*, *social cynicism*, *spirituality* (later renamed to *religiosity* in Leung & Bond, 2004) and *social flexibility* (Leung et al., 2002).

Values, which often serve as motivation that guide people in their effort to focus on achieving what is important to them, point out people's priorities in life (e.g. Rokeach, 1972; Schwartz, 1996). Although also serving as general guidelines for peoples' behaviours and choices, axioms are not based on self-prescription (Leung, Au, Huang, Kurman, Niit, T., & Niit, K., 2007). Both constructs differ in the way they operate and it is important to establish nomological relations combining both. In the words of Leung et al. (2007, p.94), "[v]alues provide the 'what' answer, in a sense that they define what one should pursue, be it wealth or

social justice. Axioms provide the 'how' answer, because how one construes the social world bears on the strategies and actions adopted for goal achievement". Despite this major difference, values and social axioms are not entirely independent constructs, but show some linkages that can be explained by motivational and cognitive processes having an influence on each other (e.g. Jost, Glaser, Kruglansjo, & Sulloway, 2003; Strack & Deutsch, 2004).

For both Schwartz's values and for the social axioms, measurement tools needed to utilize the innovative techniques to understanding national culture are already available. Values can be measured by the *Schwartz Value Survey* (SVS) (Schwartz, 1992) or as utilized in the present study using the *Portraits Value Questionnaire* (PVQ), a tool requiring a lesser ability to abstract thinking (Schwartz, Lehmann, & Roccas, 1997). The main instrument applied in this study is the *Social Axiom Survey* (SAS), a questionnaire that measures the five dimensions of social axioms. Both methods are valuable when attempting to explain phenomena in international business strategies.

One of the most prominent topics in marketing research is *Market Orientation* (MO). One reason for this is the link between market orientation and business performance that has been proven in a large number of studies. For an overview and meta-analysis see Kirca, Jayachandran and Bearden (2005). Market orientation has been defined "as a set of activities or behaviors relating to market intelligence gathering, market intelligence dissemination, cross-functionally within a firm, and the action responses based on this intelligence" (Deshpandé, 1999, p.3). "In essence, market orientation refers to the way that an organization implements the marketing concept" (Deshpandé, 1999, p.7). International business management is affected by culture in many ways (see Gupta & House, 2003; House, Hanges, Javidan, Dorfman, & Gupta, 2003). Inkpen and Tsang (2005), for example, argue that the way people establish relations and share knowledge is greatly affected by their culture. This, in turn, is of importance to the way market orientation is implemented in companies.

In recent years cross-cultural marketing research has assumed great importance in the academic and business worlds and “the importance of culture in marketing research cannot be understated” (Cano, Carrillat, & Jaramillo, 2004, p.182). Marketing managers of multinational companies face the problem of how to increase organization-wide market orientation in order for them to perform better (Nakata & Sivakumar, 2001). Luna and Gupta (2001) add that cultural differences are particularly important to understanding market behaviour. Early research on the topic reports culture’s influence on individual work behaviour, which in turn affects business performance (e.g. Schein, 1985; Steers & Porter, 1991). Conducting a meta-analytic review on studies that focused on market orientation research, Kirca, Jayachandran and Bearden (2005) took a close look at the market orientation-performance link. From a cultural perspective, using Hofstede’s (2001) dimensions of national culture, the authors found cultural differences directly influence the market orientation-performance link. Specifically, Kirca et al. (2005) propose that there is a stronger positive association between market orientation and performance in countries that have a low score on the cultural factor *power distance*. The same is true for countries that score low on *uncertainty avoidance*. The authors suggest that additional research should be conducted to test the influence of Hofstede’s remaining dimensions of culture on the market orientation-performance link. A different approach to linking culture and market orientation was used by Burgess and Nyajeka (2005). Focusing on the *Low-income Country* (LIC) Zimbabwe, the authors propose that two of Schwartz’s (1994a, 1999) cultural dimensions, namely cultural *embeddedness* and *hierarchy*, which are reported to be higher in LICs, affect the links between the antecedents of market orientation and market orientation. Specifically, they found that if cultures score high on *embeddedness* and *hierarchy*, the links between the antecedents *centralization*, *formalization* and *interdepartmental conflict*, and the level of market orientation seem to be weaker. Burgess and Nyajeka (2005) encourage all research that

focuses on the influence of culture on the market orientation construct, and propose the use of a more recent approach to define culture using social axioms.

By referring to three different statements, Cano et al. (2004) summarize the direct impact and importance of culture in marketing research: firstly, the fate of a company is often decided by the strategic decisions of its managers and employees. It is the goal of international marketing managers to increase market orientation and thereby the business performance of their global companies. The question is how to achieve this (Nakata & Sivakumar, 2001). Secondly, Luna and Gupta (2001) predict the awareness of cultural differences to be fundamental for both researchers and managers to understand market behaviour, and thirdly, adoption and implementation of the marketing concept, which is central to a market orientation, is influenced largely by cultural values that can facilitate or hinder its adoption (Nakata & Sivakumar, 2001).

The process of globalization in business is progressing faster today than ever before. Extending business across borders through export and import, joint work groups in international projects and foreign employees are common nowadays. For managers and employees alike, possessing intercultural competencies that enable one to understand and work with people with different cultural backgrounds becomes increasingly important (Ralston, Holt, Terpstra, & Yu, 1997; Stonham & Bartlett, 1992; Tung & Miller, 1990). Professional relationships between superiors and subordinates originating from different cultures can particularly influence the effectiveness of business processes (Ralston, Terpstra, Cunniff, & Gustafson, 1995; Vaught & Abraham, 1992) and being able to manage in a multinational context has become a necessity (Ralston, Hallinger, Egri, & Naethinsuhk, 2005). Knowing and recognizing the importance of such intercultural competencies for the success of an organization (Adler, 2002; Cox, 1993; Laurent, 1983; Trompenaars, 1993) has led to a new stream of research. Enhancing the effectiveness of operating in an increasingly

culturally diverse workforce is one of the topics under investigation (cf. Brewster & Scullion, 1997; Hall, 1976; Hofstede, 1993). Additionally, it is important to know how these culturally diverse characteristics affect business and business processes directly. An attempt has been made in the present study to contribute to this. Given the assumption that cultural characteristics such as social axioms affect individuals' behaviour in daily life, it can be expected that the same is true for their work.

So far, only very little research that makes use of a cultural approach has been conducted on market orientation. Following Kirca et al. (2005, p.38) who call to improve the “understanding of how the impact of antecedents of market orientation vary across different business and cultural contexts”, the main aim of this study is to examine these effects, with a particular focus on the effects of employee's social axioms on the nomological framework of market orientation. The state-of-the-art theories on cultural values and social axioms present new, valuable opportunities to explain market orientation. The present study is the first of its kind to shed light on market orientation from a cultural point of view, utilizing an up-to-date cultural construct, namely social axioms.

The goal of this research is to complement and extend the so far small body of previous research on market orientation and culture. More precisely, by taking an intra-organizational perspective, links between social axioms and the antecedents of market orientation will be discovered, using the statistical method of structural equation modelling. Once such a model is developed and proven to be universal, it will contribute to a better understanding of the nature of market orientation. Knowing about the influence of cultural institutions will help managers to increase the level of market orientation within their companies and subsequently increase their performance.

Following Bass and Wind (1995) and their explanation of the marketing science process, this study is organized in three steps: (1) the development of theoretical explanations

of marketing phenomena and how they are influenced by culture, (2) empirical testing of these explanations, and (3) extension and/or revision of generalized explanations. Therefore the present dissertation is structured in five chapters. The first chapter represents an introduction into the present research. In the second chapter the relevant literature will be reviewed and discussed. This includes three main subsections referring to the institutional, cultural and organizational context. Chapter three states the hypotheses that guide the present research. Following this, chapter four covers the research methodology and data analysis. The last chapter is dedicated to the discussion of the results. It includes conclusions about the hypotheses and the overall research problem, as well as their implications for theory and praxis. Lastly, the limitations of the study are outlined and streams of future research are proposed.

2 LITERATURE REVIEW

In order to establish the theoretical framework guiding this research, the literature section will outline several research streams that are relevant to this work. Contributions from literature to the proposed model can be categorized into three areas: institutional context, cultural context, and organizational context. Each of these will be reviewed and discussed in a separate section.

The first section will shed light on the automotive industries of the two target countries South Africa and Germany. The differences between both environments will be discussed with special reference to their economic development status as an emerging market in the case of South Africa, and a highly developed Western country, Germany. The institutional approach will be outlined and applied to portray the target industries. The next section addresses the cultural context directing this research. It spans from the concept of culture itself to the two most prominent approaches to define and measure it, namely values and general beliefs, outlining their evolvement over time. The third section covers the organizational context. In this section, several research streams on market orientation will be considered that are relevant to this work. Empirical measurement methods will be discussed and the vast spectrum of antecedents and consequences of a market orientation will be looked at. The discussed literature will then serve as a basis for the development of the hypotheses and the proposed model.

2.1 Institutional Context

2.1.1 *Emerging Markets*

The globalization of markets and internationalization of companies led to an increasing interest in so called 'base of the pyramid countries', also called emerging markets (c.f. Burgess & Nyajeka, 2005). There are, however, many country classification schemes and varying definitions of the term emerging market (EM) in literature and marketing practice (e.g. Batra, 1999; Peng, 2000). The World Bank classifies countries regarding their annual per capita income into four categories: low income countries (LICs) with U\$905 or less; lower middle income countries (LMCs) with an average income of U\$906 – U\$3 595; upper middle income countries (UMCs), where people earn between U\$3 596 and U\$11 115, and high income countries (HICs) with an annual income of U\$11 116 or more (World Bank, 2008). Following Burgess and Steenkamp (2006), who give a comprehensive overview of the different classifications of countries and combine the two most influential schemes proposed by the World Bank and the United Nations, *emerging markets* will be broadly defined as following:

Emerging markets are countries in which the gross domestic product (GDP) per capita, adjusted for purchasing power parity (PPP) and converted to U\$ (rectified for currency fluctuations over three years), equals or is less than the top ranked country classified as 'middle income' by the World Bank 2008 (see Burgess & Steenkamp, 2006). Regarding the classification by the World Bank (2008) this means that all countries that fall into the categories LIC, LMC and UMC will be referred to as *emerging markets*. In terms of the United Nations (2007) the classification *emerging markets* refers to all countries classified as 'middle human development', 'low human development' and 'developing'.

When talking about emerging markets, one often refers to developing countries that have started to achieve high economic growth rates after years or decades of stagnancy. Leaving the period of economical under-performance behind, these countries 'emerge' in terms of their level and growth in GDP. However, showing a high growth-rate in their GDP is only one of many factors that characterize these countries.

Other characteristics of emerging markets include their growing regulation of the competitive environment, as well as evolving demands and expectations on the consumer side. Following Kukovetz (2002) these variables can be referred to as 'change' characteristics. In addition to change, the unfamiliar operating environment is also a characteristic of emergent markets. This includes, amongst others, the unavailability and unreliability of market data, and in some cases an inefficient judicial system and a geographical and cultural distance from western countries that also manifests in unfamiliar business practices (Kukovetz, 2002).

Following the call of various scholars to study marketing issues from an international point of view¹ publications focusing on international marketing topics have multiplied. However, there is a clear trend to conducting research in high income, industrialized countries, as opposed to in EMs. In their recent publication in the *International Journal of Research in Marketing*, Burgess and Steenkamp (2006) plead for more research in EMs. According to Burgess and Steenkamp (2006), marketing sciences are built on a framework of generalizability of findings not only across studies, but also across national and cultural boundaries. EMs offer a good environment in which theories and underlying mechanisms can be developed and tested.

As previously discussed, EMs differ from high HICs in terms of socio-economic factors, such as their growth rate, GDP and national income. Also in the institutional context,

¹ e.g. Bolton, 2003; Dekimpe & Lehmann, 2004; Farley 1997; Gatignon, 2000; Monroe, 1993; Steenkamp, 1998, 2005; Winer, 1998

EMs present similarities that are distinguished from those of HICs, which in turn might challenge generalizations of business constructs and their relations (Wright, Filatotchev, Hoskisson, & Peng, 2005). Their cultural, socioeconomic, and regulative institutions differ considerably from those of Western HICs and therefore represent boundary conditions for developing and researching marketing theory. Therefore, in the following, the influencing characteristics of institutions, which Giddens (1984, p.24) defines as “the most enduring features of social life [...] giving ‘solidity’ [to social systems] across time and space,” will be discussed.

2.1.2 Institutional Approach

Institutional theory is prominent in the IB literature. It holds that organizations act according to country-specific institutional arrangements. While there is a vast body of literature explaining organizational behaviour using cultural particularities, the institutional perspective offers an interesting alternative. Relating to the country itself, Busenitz, Gomez and Spencer (2000, p.1 000) note that “a country’s institutional profile can serve as a viable alternative for exploring broad country differences.” In terms of explaining organizational behaviour, institutional theory has been found to be the most relevant theoretical approach (Hoskisson, Eden, Lau, & Wright, 2000), particularly in today’s globalized business environment (Acquier & Aggeri, 2006; Hatchuel, Le Masson, & Weil, 2005; Scott, 2004). Institutional theory helps to explain organizational behaviours and strategies in varying environments by addressing the relationships between them and related institutions (Scott, 1995). At the heart of the institutional approach is the institution itself. *Institution* refers to socially constructed templates for actions that are both generated and maintained through continuing interactions, and are composites of cultural rules defined by the government, media and actions of professions (Meyer & Rowan, 1977; Zucker, 1977).

The central idea is that institutions are enduring elements that affect the behaviours and actions of both individual and collective actors. Institutional approaches to studying an organization focus on the relationships between such organizations and the environment in which they operate. Such studies attend to the rational formal structures that influence organizational behaviour. The processes that drive and control institutional actions are of particular interest (e.g. DiMaggio & Powell, 1983; Greenwood & Hinings, 1996; Meyer & Rowan, 1977). One of the most widely accepted definitions of institutions is that of Scott (2001, p.48), who defines institutions as being composed of “cultured-cognitive, normative and regulative elements that [...] provide stability and meaning to social life [...]. Institutions are transmitted by various types of carriers, including symbolic systems, relational systems, routines and artifacts” and they “operate at multiple levels of jurisdiction.” Guy (2003, p.649) describes the term as emphasizing “how political behavior is embedded in an institutional structure of rules, norms, expectations, and traditions that constrain the free play of individual will and calculation.” Other authors put more emphasis on the rules that define social relationships (Fligstein, 2001), the role of human agency in devising institutions (e.g. North, 1990), or as Jepperson (1991) defines institutions, as the product of purposive action. Scott (2001) offers an analytical framework including the three pillars of institutional analysis: *regulative*, *normative*, and *cognitive*. Scott’s framework has been widely used and proven helpful for analytical uses, however there is also some controversy about it (e.g. Hirsch & Lounsbury, 1997). The pillars are represented by three forms of external pressures: regulatory (by powerful actors), cognitive (by competitors) and normative (by the wider community of stakeholders). In the following, these three pillars will be explored in greater detail.

The *regulative pillar* refers to rules and laws that constrain and regulate behaviour. It entails “the capacity to establish rules, inspect others’ conformity to them, and, as necessary, manipulate sanctions – rewards or punishment – in an attempt to influence future behavior” (Scott, 2001, p.52). In short, it defines what organizations may or may not do (Eden & Miller,

2004). Within a national environment, this includes political, social and legal rules governed by coercive mechanisms that are either threatened to be or are actually enforced (DiMaggio & Powell, 1983), either by a governmental mandate, resource interdependence, state-sponsored legitimacy or subtle political processes (Greenwood & Hinings, 1996). According to Ang and Michailova (2006), the degree of trust in the regulative institutions varies with the environment. People in less restrictive institutional environments are confident about everyone adhering to laws and rules, since on the one hand they are market-friendly and on the other are protected and enforced by the government and other issuing bodies. Where legal protection is less developed and market-related policies are not as favourable to the organizations or less easy to meet, regulative institutions are more restrictive. Less developed countries or EMs are particularly more likely to present organizations with more restrictive regulative institutions. Organizations operating in such an environment not only have to face low levels of information transparency, but also regulatory unprotectability, which is represented by unjustified policy-changes, and there is therefore less trust in the regulatory mechanisms (Ang & Michailova, 2006).

The *normative pillar* of institutions stands for values that are linked to ends and norms that are connected to means, which either confine or empower certain behaviours. It specifies how things should or should not be done (Eden & Miller, 2004). “[N]ormative systems define goals or objectives but also designate appropriate ways to pursue them” (Scott, 2001, p.55). These goals and objectives can be reflected by social norms, beliefs or values and therefore embody national (Scott, 1995) or local culture (Kostova, 1999).

The *cultural-cognitive pillars* of institutions are “the shared conceptions that constitute the nature of social reality and the frames through which meaning is made” (Scott, 2001, p.57). It defines what is or is not true and what can or cannot be done (Eden & Miller, 2004) and reflects social knowledge and cognitive categories that certain phenomena are influenced

by (Kostova & Roth, 2002). An organization's strategy partially depends on the cognitive categories constructed in order to meet the conditions of the environment (Haveman, 1993). One way to achieve conformity by mimicking other people's behaviours (i.e. *mimetic isomorphism*, DiMaggio & Powell, 1983) is to replace institutional rules with more technical rules (Meyer, Scott, & Deal, 1983). Particularly under conditions of uncertainty, this can help an organization to survive by providing cognitive legitimacy (Oliver, 1991; Zucker, 1977). Organizations that fail to follow the legitimated course of action are likely to be seen as both less reactive and less effective (Ang & Michailova, 2006).

Based on Scott's (1995) conceptualization of the three institutional pillars, Kostova (1997) introduced his three-dimensional country institutional profile as a means for conceptualizing and analyzing country-level institutional characteristics. Kostova's concept refers to the regulatory dimension as national governmental policies; the normative dimension is represented by value systems, and widely shared social knowledge replaces Scott's cognitive dimension, all of them affecting national business activities.

2.1.2.1 The Moderating Role of a Country's Institutional Context

It can be summarized that a society's institutional characteristics are reflective of its fundamental problems as well as its social and economic reward contingencies used to regulate its operations (Steenkamp & Geyskens, 2006; Triandis, 1989). The priorities specified by an institutional system can be compatible with or differ from both individual's and organization's evaluative structures which in turn leads to their reaction to the characteristics of the system. Therefore, institutional priorities affect beliefs and behaviours characteristic to the system's members (Scott, 2001), thereby providing standardized mechanisms that influence the evaluation and expression of behaviours and beliefs. Burgess and Steenkamp (2006) describe these mechanisms as being responsible for interactions between society-level and micro-level variables.

Differences in EM and HIC cultural institutions (e.g. Schwartz, 2006; Hofstede, 2001) appear to be especially relevant to market orientation theory. Literature offers a number of examples of organizational studies that were affected by the institutional context of the specific research environment.

For instance, in the so far most comprehensive meta-analysis of the market orientation literature, Kirca et al. (2005) find that Hofstede's (2001) *uncertainty avoidance* and *power distance* affect the relations of market orientation and performance. Deshpandé and Farley (2004) suggest that *individualism* and *collectivism* affect the relations between market orientation and its antecedents by shaping preferences for interpersonal relations with others inside and outside of the company. The authors report that customer orientation and innovativeness positively affect performance in both HICs and EMs, with market orientation being more important in EMs. Deshpandé and Farley (2004) attribute this effect to a lesser development of marketing in EMs, which leads to higher pay-offs when investing in it. However, Burgess and Steenkamp (2006) offer a complementary institutional rationale and hold cultural characteristics such as *embeddedness* and *hierarchy* responsible for this effect. Burgess and Nyajeka (2005) theorize that high *cultural embeddedness* and *hierarchy* in EMs present boundary conditions for expected antecedent relations with market orientation.

Other influences of EM institutions on organizational matters include the increased importance of stakeholder relations explained by *social connectedness*. For instance, interaction effects were reported between customer orientation, competitor orientation, as well as employee orientation and financial market performance in China (Luk, Yau, Tse, Sin, & Chow, 2005) and Peng and Luo (2000) found contacts between Chinese managers and government officials to positively affect performance. Country characteristics even show moderating effects on established theories such as transaction cost economics. According to Geyskens, Steenkamp and Kumar (2006) the institutional environment predictably impacts on the role of transaction cost considerations in government decisions. More specifically, in

countries featuring a strong *rule of law*, high *societal cynicism* and *cultural mastery*, transaction cost theory explains the departure from market governance to a lesser extent and has a stronger explanatory power in countries with a more *hierarchical* administration.

Referring to these findings, Burgess and Steenkamp (2006) highlight the need to test even established theories in different institutional contexts as encountered in EMs. Research of contingency effects in such boundary conditions could lead to a better understanding and a higher generalizability of the results of organizational studies (cf. Bagozzi, 1994; Douglas & Craig, 1997; Lee & Green, 1991; Parker & Tavassoli, 2000).

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2.2 Research Environment – Industry Profile

The increasing need and desire for mobility and motorization, which in turn is essential for an economic development, has granted global production of motor vehicles to run at record levels. With the mobility comes access to basic necessities, employment, education and medical services, but mobility also offers access to essential supplies of goods and services, as well as social and cultural prospects. In terms of development, one industry stands out for its great impact on other industries: the automotive industry. A big portion of its revenues is invested in research and development (R&D) and other industries gain directly or indirectly from new technologies. As a rule of thumb, one qualified job in the automotive industry creates seven to ten qualified jobs in related industry sectors (UNEP, 2002). In addition to its impact on other industry sectors, the automotive industry serves as an economic barometer in the financial world and is an indicator for the global overall economic performance. Many of the large automobile manufacturers are traded as ‘blue chips’ at the international stock exchanges, and international investors can assess their performance. For the listed companies, this means that transparency and open communication towards the public play a vital role, and therefore have a significant impact on management. A variety of negative influences of the automotive industry exist, in particular regarding the environment, such as polluting manufacturing processes and the operation of motor vehicles, which leads to carbon dioxide and other hazardous emissions. All these factors lead to the need for a continuous dialogue and co-operation with a multitude of stakeholders, such as other industries, the public sector, trade unions, the mineral oil industry, environmental associations, and many more.

The main goal of this study is to reliably uncover and confirm effects of culture on market orientation. Therefore, the present study includes data from two culturally distinct countries. Additionally, the two countries could not be economically further apart; one is a

developed HIC, the other classified as an EM. In order to diminish differences in the socio-economic and regulative context within each country and to set a similar research environment in terms of the target group, research was conducted within the same industry sector. This is also supported by business connections between organizations of both countries, such as shared operations, supply agreements and global industry standards.

2.2.1 *The Automotive Industry*

The *Automotive Industry* is the generic term for companies involved in the design, development, manufacture, marketing and sale of motor vehicles, in which *motor vehicle* refers to a *machine* which incorporates a *motor/engine*, and is used for transportation. Both South Africa and Germany offer an extensive automotive industry.

2.2.1.1 *South Africa*

Having developed under high levels of protection, for instance high tariffs or local content programs, the South African automotive sector, which incorporates the manufacture, distribution, servicing and maintenance of motor vehicles, has become one of the main pillars of the country's economy, particularly with regard to exports, employment and the GDP. Although still small in global terms, South Africa hosts more than three quarters of the continent's vehicle production. Within the last ten to fifteen years, the automotive and automotive component sectors have become integrated parts of the global industry. This development has been supported by the shift in ownership of the companies that strive towards multinational corporate groups. One reason for the success of the industry is the Motor Industry Development Programme (MIDP), whose main goal is to develop a competitive strategy for the country for automotive manufacturing, in order to profit from an increasingly globalized environment. The MIDP proposed the specialization in a small number of high volume products that can be exported competitively. The positive effects expand into many manufacturing activities, including the production of steel, paint, rubber,

textiles, plastics, petro-chemicals and automotive components production. Furthermore other areas such as logistics, research and the government amongst others indirectly profit from the industry in terms of employment. Combining the employment of automobile manufacturing, component manufacturing, vehicle sales, maintenance, as well as servicing adds up to 320 000 employees countrywide (NAACAM). Although South Africa's economy remains strong, its GDP growth rate slowed down in 2007. For the country's automotive industry, 2007 was a mixed year in terms of development and success. Whereas new passenger car sales declined, commercial vehicle and bus sales recorded an increase. The volatility of the South African Rand, as well as the increased over-capacity in vehicle production and the advance of Chinese and Indian manufacturers, will continue putting pressure on the industry. Another negative factor is the decreasing ability to compete because of a high wage settlement for the auto industry, agreed on in 2007, which led to higher labour costs and a need for automation to offset this.

There are three organizations involved in the South African automotive industry that should be mentioned: for 50 years now, the *National Association of Automobile Manufacturers of South Africa* (NAAMSA) has been the official body representing new vehicle manufacturers. Its members include major importers and distributors of new vehicles, as well as South African manufacturers and assemblers. NAAMSA provides its members with detailed numbers on the industry, which also serves as an important barometer on the country's economy and helps them to understand and follow the industry's development locally and internationally. Secondly, there is the *National Association of Automotive Component and Allied Manufacturers* (NAACAM). NAACAM provides companies with a dynamic forum to formulate policies and take actions that benefit the whole industry. Topics the organization pays particular attention to include government incentives, international trade fairs, the contact to foreign automotive organizations, as well as information and advice on *Broad Based Black Economic Empowerment* (BBBEE). Furthermore, they supply insight on

business and economic trends in the country in order to assist their members. Finally, the *Automotive Industry Export Council* (AIEC) was established as the official private sector export promotion body for the automotive industry in South Africa. Products that fall under the jurisdiction of AIEC incorporate cars, trucks and buses, original equipment components, aftermarket parts, as well as accessories. AIEC's goals are to promote South Africa's automotive manufacturing capability and to provide information on potential export opportunities in existing and new markets.

Even though South Africa's domestic market for motor vehicles is doing well, it is not the main reason for international automotive manufacturers to invest in the local market. In fact, South African wages are well below those of workers in HICs and comparable to eastern European standards, but the Far East will catch up soon and be able to offer the same quality for a much lower price. In addition, energy costs were among the lowest in the world, therefore presenting an advantage to western production facilities. However, Daimler Chrysler reported in 2005 the production costs of a *Mercedes C-class* to be 2 000 EUR higher than when produced in a German manufacturing facility (bfai, 2005). This is due to South Africa's geographic position, far away from the core markets of Europe, North America and the Far East, leading to high logistic costs.

The *Motor Industry Development Programme* (MIDP) tips the scales for foreign companies to invest in the automotive production in South Africa. It was implemented on the 1st of September 1995 by the South African government to assist the manufacturing sector to gain international competitiveness. The goal of the MIDP was to help the industry to solve the problems caused by its high cost structure and relatively low volume production, by allowing exports and supporting imports. In essence, the MIDP aims for domestic *Original Equipment Manufacturers* (OEM) to specialize in a few high volume models. This will support economy of scale benefits and exports become more competitive. On the other hand, vehicles that are

not assembled locally can be imported at low or no custom duties. The objectives of the MIDP were considered non-mutually exclusive, as they could be realized through a phased integration of the local South African industry into the global market (Barnes & Morris, 1999). At the beginning of 2007, the *Department Trade and Industry of the Republic of South Africa* (dti) reviewed the MIDP, which led to the extension of the programme until 2012².

2.2.1.2 Germany

The German automotive industry plays a vital role, not only from a mobility point of view, but also from the economic perspective. The German automotive industry is a powerhouse at the centre of a global marketplace. In addition to the automotive value chain's sizeable contribution to Germany's GDP, the industry remains one of the most important employers in the country, with a total of close to 750 000 employees in 2007 just in the sectors of the manufacture of vehicles, trailers, bodies and the manufacture of parts and accessories for this group (VDA, 2008). The total employment depending on the automotive sector is estimated to be five times as high (ACEA, 2008). In addition to the large manufactures, Germany's supplier industry is as dynamic as it is diverse. Germany has the necessary infrastructure, the research facilities and the highly trained labour force that are needed to run the industry successfully. Suppliers of electronics, electrical engineering, information technology, plastics and glass production, metal manufacture and processing, optics and precision mechanics play particularly important roles in the industry, and can be described as pillars in the national economy (ACEA, 2008). The German automotive industry has to be acutely aware of trends reshaping many areas of interests and issues in the 21st century. Rapid globalization confronts the industry with a near-universal competition and the continuing technological revolution changes this industry into an increasingly knowledge-based one. A factor of the industry's continuing success is its dual strategy, in which a foreign-based production has been established and consolidated systematically, while at the

² For a detailed review of the MIDP see Lamprecht (2006).

same time export activities have been increased. This was made possible by a very dynamic internationalization of a variety of business activities. Another important factor is the country's stable investment environment. Social, economic and political stability contribute to continuous success in the industry. The same is true for judiciary and civil services that ensure legal security, for instance in the areas of contractual agreements or intellectual property protection.

There are a number of organizations important to the German automotive sector. Four of them will briefly be looked at. The primary objectives of the *German Federation for Motor Trades and Repairs* (ZDK) are to protect and promote the professional and social interests of the motor vehicle trade and repair, not only against its members' business partners, such as motor vehicle manufacturers, but also to support them in dealing with public and other authorities, both nationally and internationally. The second organization worth mentioning is the *German Engineering Federation* (VDMA), which represents approximately 3 000 mainly small and medium sized companies in the German engineering industry, covering everything from component and plant manufacturers, system suppliers and system integrators, to service providing companies. The VDMA focuses on the labour market and pay policy, education policy, tax policy, research/technology policy, corporate financing, trade policy, environment and energy policy, as well as trade fairs. Another important organization is the *German Machine Tool Builders Association* (VDW). The organization supports its members from the German machine tool industry in terms of channelling knowledge transfer, representing their interests to politicians and the public, as well as the facilitation of joint research, such as practice-based projects that benefit the whole industry. Lastly, the large *German Association of the Automotive Industry* (VDA) represents the umbrella organization of the German automotive industry, and promotes the entire industry's interests, both nationally and internationally. The VDA organizes automobile manufacturers, suppliers and manufacturers of trailers, special bodies and containers under one association. It represents the interests of its

600 member companies in the areas of the motor traffic industry, such as economic and transport policy, technical legislation, quality assurance, taxation, as well as environment and climate protection.

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2.3 Cultural Context

2.3.1 *Introduction Culture*

2.3.1.1 *Defining Culture*

“I believe only in French culture, and regard everything else in Europe which calls itself 'culture' as a misunderstanding. I do not even take the German kind into consideration.” Friedrich Wilhelm Nietzsche, 1844-1900

With this quote by the famous philosopher Nietzsche, Cateora and Graham (2002, p.67) remind us that culture has and will always be a source of disagreement and misunderstanding. Knowing and understanding a culture does not only include being familiar with its specific affiliated courtesies, personal space, language, communication and social behaviours, but also knowing habits, actions and reasons forming specific behaviour (Cateora & Graham, 2002, p.76). Following Hofstede and Bond (1988), the definition anthropologists use for culture is 'ways of living' of a group of people, which are passed on from generation to generation and acted out in social institutions such as family, religion, education, government and business. The concept of culture embraces values, ideas, symbols and attitudes, both on a conscious and on a subconscious level. According to Hall (1977, p.16) “[C]ulture is learned, not innate” and Keegan (2002) adds that the earlier a person adopts a culture and its way of living, the more difficult it is to change this behaviour. Hall (1977, p.16) continues: “all facets of culture are interrelated: Influence or change one aspect of a culture and everything else is affected.”

Another common way to derive the concept of culture is by defining it by collective meanings of things and persons given by members of a cultural group (Smith, Peterson, Schwartz, Ahmad, Akande et al., 2002)³. Herskovits (1948, p.17) conceptualized culture in a

³ e.g. Hofstede (1980a, p.21): “collective programming of the mind”.

broader sense, defining it as “the man-made part of the environment” and stated that culture involves more than differences in the interpretation of behaviours, but in the behaviour itself.

Cateora and Graham (2002) draw from Herskovits (1952) and Scupin (1999) to give an overview on the scope of the term culture and its meaning to anthropologists. The authors outline five categories: (1) *Material Culture*. The first category includes technology, which stands for the know-how members of a society possess in order to create goods as well as economies, which describe the way people use their know-how and how they deal with the outcomes of their work. Secondly, there are (2) *Social Institutions*, including the four institutions that most strongly influence people’s behaviours and values: family, education, political structures, and media. All these institutions influence relations among members of a culture. Examples include harmony, behaviour, the position of men and women in society, or social classes. The next category is labelled (3) *Humans and the Universe*, including belief systems such as religion, but also superstitions. Closely connected to the effects of the last category are a culture’s (4) *Aesthetics*. Aesthetics stand for a culture’s arts such as music, drama and folklore, as well as graphic and plastic arts. Each culture has its own standards defining what is aesthetic and what is not. Lastly, there is (5) the *Language*. Communication is one of the most important factors to understanding culture and at the same time one of the most difficult elements to master for people who do not belong to the same cultural society.

Conceptualizing Culture. Comprehensively researching a multinational organization, IBM, Hofstede (1980a) developed four value dimensions that attempt to explain variations in culture. Although being one of the most widely cited authors in the field of value dimensions, other value and relational dimensions exist that try to explain and classify culture (Haire, Ghiselli & Porter, 1966; Kluckhohn & Strodtbeck, 1961; Parsons & Shils, 1951; Ronen & Shenkar, 1985). A number of researchers, however, appealed for research that offer a broader understanding of the complex issue of culture (Bond & Smith, 1996; Earley & Gibson, 1998;

Osland & Bird, 2000). Culture is more than the programming of abstract values (Mezias, Chen, & Murphy, 1999). “[C]ulture provides the categories by which we understand the world, and the scripts and schemes we use to guide behavior” (Mezias et al., 1999, p.326). Triandis (1996) describes the concept of cultural syndromes as being able to shed light on cultural dimensions and their interrelations. Syndromes are able to enhance knowledge about culture beyond simple uni-dimensional models made up of lists of values (Lytle, Brett, Barsness, Tinsley, & Jansens, 1995; Mezias et al., 1999; Osland & Bird, 2000). This shift from plain cultural dimensions to cultural syndromes is imposingly illustrated by Hofstede’s (1980a) cultural dimension individualism-collectivism (Sully de Luque & Sommer, 2000). As a core cultural dimension, it was the topic of extensive research on individuals and their self-view in contrast to their cultural peers (Earley, 1997; Schwartz, 1992; Triandis, 1989; Trompenaars, 1993). Triandis and Gelfand (1998), however report that the structure of Hofstede’s cultural dimension, individualism-collectivism, seems to have a multifaceted structure and is complex to apply.

In order to get a better insight into the realm of culture, scholars proposed to expand the population as well as the construct under investigation itself (Bond & Smith, 1996; Earley & Gibson, 1998; Lytle et al., 1995).

Research on Culture. “Cross-cultural research is critical to making the science of psychology universally applicable and to helping organizations manage cultural differences as they continue to globalize” (Gelfand, Nishii, & Raver, 2006, p.1 225). The desire to understand cross-cultural differences affects virtually all areas of organizational psychology, reaching from micro-level to meso-level to macro-level processes (Gelfand et al., 2006)⁴.

⁴ e.g.: work motivation (Erez & Earley, 1987), conflict and negotiation (Gelfand & Brett, 2004), group dynamics (Earley, 1993), leadership (House, Hanges, Javidan, Dorfman, & Gupta, 2004), human resource practices and organizational culture (Aycan, Kanungo, & Sinha, 1999; Kanungo & Jaeger, 1990)

Following Leung et al. (2007), when studying culture, two useful and complementary approaches can be found: (1) focus on culture-specific processes and meaning systems (used in cultural psychology) and (2) focus on universal or etic processes across cultures (cross-cultural psychology) (Greenfield, 2000; Shweder, 2001). The latter stands as an example for the identification of cultural dimensions in order to characterize different cultures in the world using values, beliefs or social axioms. Explaining culture and measuring its characteristics has been the focus of research in the field of psychology for a long time. Considerable effort has been made to uncover variation in behaviour explicable by culture, commonly done by having individuals rate the importance of concepts such as values, personality, identities and beliefs and comparing them across cultures (Fischer, 2006). Comparing mean scores of self-ratings with those from different cultures are assumed to reflect their characteristics⁵. Fischer (2006) reviewed measurement methods for culture and found that self-reports are the dominant method for cross-cultural comparisons. Examples are Leung and Bond (2004) and Leung et al.'s (2002) large scale social axiom study, research on personality (McCrae, 2002), individualism-collectivism (cf. Oyserman, Coon, & Kemmelmeir, 2002a), self-construals (Markus & Kitayama, 1991; Singelis, 1994), and subjective well-being (Diener, E., Diener, M., & Diener, C., 1995). Alternatively to using self-reports of behaviours, values or likes, some researchers ask respondents for ratings of the average characteristics of the group they belong to (e.g. Glick, 1985; James, Joyce, & Slocum, 1988).

2.3.1.2 Multiculturalism and Cultural Identity

According to Triandis (1994) the cultural identity people in a specific area or location develop is determined by a wide ideological framework of that place. Rao (1997) states that societies are largely determined by their subcultures. According to Wood and Howell (1991) virtually all countries consist of subcultures. However, with time each of these groups slowly

⁵ e.g. Hofstede, 2001; Kim, Triandis, Kagitçibasi, Choi, & Yoon, 1994; Oyserman et al., 2002a; Schwartz, 1994a; Smith & Schwartz, 1997

loses some of their individual characteristics and adapts to the others. This assimilation process is called *subtractive multiculturalism* (Triandis, 1994). The other essential condition for cultural convergence is the process of integration, labelled *additive multiculturalism*, which stands for including new characteristics to the behaviour of an existing group (Triandis, 1994). This process does not always happen at the same pace, since factors, such as historical conflicts, can make it difficult for the process to be initiated. This movement and change within cultural subgroups is of special interest, particularly in the international business context. Leung et al. (2005), for instance, state that convergence is happening in some domains, especially in consumer values and lifestyles. Hofstede (2001) found that this change is not rapid but consistent over time and deems the cultural shifts relative as opposed to absolute. The direction of flow is, however, not fixed, as Leung et al. (2005) show. Non-Western cultural values have influenced Western societies, and vice versa. An example in the international business context would be the strong emphasis Western companies place on quality and teamwork, partly taken from management concepts of Japan.

2.3.1.3 Culture and Ethnicity

Ethnicity, which Hui, Joy, Kim and Laroche (1992) describe as both an automatic characteristic of being part of a racial group that defines its members and others using ethnic particularities, as well as the process of identifying oneself in such an ethnic group, is seen as a relevant causal construct in research on globalisation and international business (Chan & Rossiter, 1997). Trompenaars and Wooliams (2004, p.208) define an ethnic group as “a social group that has a common cultural tradition, common history, and common sense of identity and which exists as a subgroup in a larger society. By implication, the members of an ethnic group differ with regard to certain cultural characteristics from other members of their broader society. The ethnic group may have its own language, religion, and other distinctive cultural customs.” The authors continue that members of such a group identify themselves through positive feelings they get from belonging to a distinct social group with shared traditions.

Chan and Rossiter (1996) describe ethnicity as resulting from (1) biological and physical characteristics, (2) perceived and actual personality traits, and (3) self-oriented, social and external cultural values and norms. Pires (1992) argues that ethnic groups, just like people, have personalities and that cultural values are often consistent with their ethnic counterparts. Following Engel, Blackwell and Miniard (1993), Chan and Rossiter (1996) claim that norms or beliefs of a group that concern the behaviour of its members are caused by cultural values. Another term in the ethnicity or ethnic identity context is *acculturation*. Olmedo (1979) describes acculturation as the degree to which a cultural group or person adopts the values and norms of others. Ethnic loyalty (Padilla, 1979) or value acculturation (Szapocznick, Scopetta, Kurtines, & Arnalde, 1979) reflect “the extent to which individuals affiliate with their original culture and adhere to its traditional values” (Olmedo, 1979, p.1969). Following Rokeach’s (1973) paradigm of describing values as enduring beliefs that certain modes of conduct or end-states are personally or socially preferable and that each person owns a set of values that are ranked by their importance, Pires (1999) develops the thought that this concept is also applicable to ethnic groups. Pires states that the degree of a person’s affiliation with an ethnic group depends on the extent to which the group’s values overlap with those of its members (cf. Deshpandé, Hoyer, & Donthu, 1986; Faber, O’Guinn, & McCarty, 1987; Valencia, 1985).

For this research, it is interesting that culture is cited as one of the components of ethnicity (Chan & Rossiter, 1996). The authors state that ethnicity can be seen in terms of various characteristics of the group, such as language, religion, traditions and behaviours (cf. Kotler, 1994). Although other scholars developed their own view of culture⁶ and a clear definition is not easy, the construct of culture is an accumulation of factors such as language, religion, habits, beliefs, traditions, attitudes, behaviours, perceptions, values and many others (Pires, 1999).

⁶ e.g. Hawkins, Best, & Coney, 1992; Solomon, 1996; Stanton, Miller, & Layton, 1994

2.3.1.4 Models of Culture

Schein's (1992) model of culture. Following Erez and Gati (2004) people's core values and norms are shaped by culture. Social learning processes are responsible for sharing and transmitting these values from one person to the other, conserving them in new generations. Bandura (1986) offers the example of learning processes as well as the effects of individual actions. Using this concept, Schein (1992) includes in his definition of culture the learning of a group over a period of time, as it deals with problems of surviving its external and internal inner integration problems. Additionally, Schein's (1992) model of culture proposes to distinguish between dimensions of culture regarding their level of visibility.

The most visible and audible behaviours, as well as the physical and social environment of a group, form Schein's most external level of his model. Examples for theories dwelling on this level are (1) House, Hanges, Ruiz-Quintanilla, Dorfman, Javidan, Dickson, Gupta and GLOBE (1999) who assessed culture in their Project GLOBE, focusing on aspired values as well as actual behaviours; (2) Smith et al. (2002) as well as (3) Trompenaars (1994), whose work is also driven by values. Values that reflect the actions that are right or wrong when dealing with reality form the middle level of the model. This is also what most theories of culture focus on⁷. Lastly, the deepest and most 'invisible' level is made up of basic assumptions and beliefs about human nature and people's relationship with their environment. According to Erez and Gati (2004) only very few cultural models focus on this level of research. An example for this is Leung et al.'s (2002) social axiom study, which will be reviewed in detail later.

A Multi-level, Multi-layer Construct of Culture. Leung et al. (2005) propose a model of culture based on a multi-level approach. Their model consists of five levels reaching from "the most macro-level of a global culture, through national cultures, organizational cultures,

⁷ e.g. Chinese Cultural Connection, 1987; Hofstede, 1980a; House, Hanges, Ruiz-Quintanilla, Dorfman, Javidan, Dickson, Gupta & GLOBE, 1999; Inglehart & Baker, 2000; Ronen & Shenkar, 1986; Schwartz, 1992

group cultures, and cultural values that are represented in the self at the individual level” (Leung et al., 2005, p.362). Schein’s (1992) work influenced their model by adding the view of culture as a multi-level construct, which assumes that the most external layer of observed behaviours is followed by a level of values, and the deepest level being basic assumptions, which can be seen as taken for granted. Due to its multi-layered nature, the proposed model adopts the thought that culture exists at all levels. Regarding change at these levels, “at each level change first occurs at the most external layer of behavior, and then, when shared by individuals who belong to the same cultural context, it becomes a shared value that characterizes the aggregated unit (group, organizations, or nations)” (Leung et al., 2005, p.362).

Figure 1
Levels of Culture



Adopted from Leung et al. (2005, Figure 1, p.363).

The most macro-level of Leung et al.’s (2005) model is *global culture*. In the business context, this level stands for culture arising from global networks and institutions that span across national and cultural borders and their procedures and rules. One level down is

national culture, including variations of local cultures, followed by local *organizational culture* that, although sharing some of the national and global values and norms, vary in their local characteristics. Within *organizations* is another level, *group culture*, where one can find sub-units that on the one hand identify themselves with the common national and organizational culture, but on the other hand have a variety of differences, such as their leader's values, as well as functions and level of education of their members. The inner level of this cultural model is formed by *individuals*. Through the process of socialization, cultural values from higher levels of culture are transmitted to individuals. "Individuals who belong to the same group share the same values that differentiate them from other groups and create a group-level culture through a bottom-up process of aggregation of shared values" (Leung et al., 2005, p.363).

2.3.1.5 Culture and International Business

The influence of culture on organizational theories has become an inherent part of research in the field of international business (Bond & Smith, 1996; Boyacigiller, Kleinberg, Sackmann, & Phillips, 1996; Earley & Erez, 1997; Earley & Gibson, 1998) and considerable work has been done on theories concerning cultural issues (Leung et al., 2005).

"[C]ultures of the world are characterized by both differences and similarities" (Cateora & Graham, 2002, p.68). Therefore, the authors describe the task of global marketers as twofold. On the one hand, it is necessary to recognize and understand certain cultural differences in order to use this knowledge to incorporate it into global marketing strategies. On the other hand, knowing shared cultural characteristics of different markets helps to avoid unnecessary development or adaptation costs for differing marketing mixes. In this new millennium, culture plays a major role in the globalized marketplace, and executives face a broadened reach of their organizations that offers trajectories for business, one of them being national culture (Cateora & Graham, 2002). Hofstede's (1980a) classic work on culture

started a new way of thinking about international business. Traditionally, business research focused on economic and legal issues, as well as on organizational structures. Now national culture has become an increasingly important topic in international business and hardly any instances are unaffected by culture at all (Leung et al., 2005)⁸. Additionally, Kirkman, Lowe and Gibson (2006) reviewed studies that identified direct or indirect effects of Hofstede's (1980a) cultural value dimension on individual outcomes, and found ten categories of outcomes that are related to culture: change management behaviour, conflict management, negotiation behaviour, reward allocation, decision-making, human resource management, leadership, individual behaviour in groups, personality, and work attitudes/emotion.

2.3.2 Value Approach

2.3.2.1 Culture and Values

"Each of us confronts a material, a social and a spiritual universe that must be structured so that we can negotiate our way through the maze of life. This structuring involves prioritizing our goals for the various types of situation we confront, and then using our received and achieved knowledge to realize our goals. Through a lifetime of transactions with our world, we develop a blueprint for action or inaction at this interface." (Leung & Bond, 2004, p.120)

This section will review and discuss the role of values in cross-cultural research and give an overview of the most important contributors in the field of value research and their work.

Following Schwartz (1996), a general view on values is that they serve as guidance and justification for people's actions and provide a basis to explain motivations, norms and opinions⁹. Researchers from various disciplines use values to explain attitudes, opinions and actions since they are presumed to influence those. Schwartz and Bilsky (1987) list the five main features of values that are important for social science research: values are (1) concepts

⁸ For broad reviews on how national culture affects business activities, see e.g. Boyacigiller and Adler (1991) and Earley and Gibson (2002).

⁹ e.g. Halman & de Moor, 1994; Rokeach, 1973; Schwartz, 1992; Williams, 1968

of beliefs (2) about desirable end states or behaviours that transcend (3) specific situations, (4) guide the selection or evaluation of persons, behaviour and events, and (5) are ordered by relative importance. Using values to conceptualize culture has the advantage of being able to express them in a context-free way (Schwartz, 1999). Kroeber and Kluckhohn's (1952, p.181; cited by Adler, 1997, p.14) definition of culture reads:

"Culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other, as conditional elements of future action."

Given this classic definition, the mapping of culture has usually relied on using values. Leung et al. (2002) give a short historic overview of the development in studying culture: attempts to define and measure culture such as by Kroeber and Kluckhohn (1952) and Rohner (1984) together with Hofstede (1980a) build the classic framework in this line of research. Hofstede's work on work-related values and his cultural dimensions, in particular, have been used extensively in guiding cultural research (e.g. Triandis, 1995). Subsequently, a number of large-scale projects have adopted the values approach to examine and explain culture and its varieties. Complementing Hofstede's work, the Chinese Culture Connection (1987) found another value dimension by using values relevant in China: *Confucian work dynamism* or *short-term versus long-term orientation* (Hofstede, 1991). Schwartz's (1994a) seven value dimensions at a cultural level find their roots in "a more psychologically grounded mapping of cultures" (Leung et al., 2002, p.286). The three value dimensions defined by Smith, Dugan and Trompenaars (1996) converge with earlier results of cultural surveys, even though their methodologies differ significantly (Smith & Bond, 1998). Excepting the research conducted by Bond (1988) and Schwartz (1999), all approaches mentioned using values have been carried out at the national level as opposed to the individual level of analysis. House and his

associates (2003) developed a major project called *Project GLOBE* with the goal to understand leadership behaviour better. Nine *a priori* formulated cultural dimensions were identified: *performance orientation*, *assertiveness orientation*, *future orientation*, *humane orientation*, *institutional collectivism*, *family collectivism*, *gender egalitarianism*, *power distance*, and *uncertainty avoidance* (House et al., 2004). Most of these cultural dimensions have proven to be conceptually related to Hofstede's dimensions, yet they are still useful for understanding certain phenomena found in international business research (Leung et al., 2005). Inglehart (Welzel, Inglehart, & Klingemann, 2003) orchestrated another large-scale project, measuring attitudes, values and beliefs in samples from more than 70 countries. Using the results of the *European/World Values Survey*, Inglehart identified two dimensions called *traditional versus secular-rational orientations* and *survival versus self-expression values* (Inglehart & Baker, 2000). This extensive research on values enables us to compare cultures using variations in their characteristics of values and relate them to social behaviours (e.g. Bond, Leung, & Schwartz, 1992; Sagiv & Schwartz, 1995). However, not all behaviours are explainable by means of values (e.g. Ip & Bond, 1995).

Measuring values has been and still is a challenging task, and developing the perfect methodology that suits all purposes seems to be difficult, since standards differ between theoretical and empirical research (Hitlin & Piliavon, 2004). Mixing values with attitudes, beliefs and opinions makes it particularly difficult to compare results from the various approaches. In the following section, the main contributors to the field of value research and measurement will be reviewed.

2.3.2.2 *The Nature of Values*

Researchers have been slow to develop and agree upon a concept to summarize basic values (Braithwaite & Scott, 1991). Burgess (1992) summarizes the three key concepts of values in his historical review as (1) *subjective values*, (2) *social values*, and (3) *personal*

values. “Subjective values answer the question, “What is this worth?”” (Burgess, 1992, p.37). Rational choice theory, which refers to weighting results of actions against costs, is suggested to explain this concept best (Light, Keller, & Calhoun, 1989). Important contributions came from Zeithaml (1988) who has linked subjective values to other value concepts (Burgess, 1992). Anthropologists as well as sociologists use the concept of social values to understand consumers by studying the influences of society, culture, and situations on them. Personal values refer to “end-states or modes of conduct considered to be desirable by individuals” (Burgess, 1992, p.37). Neither cultural nor social anthropologists use personal values as a key concept for their work (Mair, 1972). More recently, there has been a shift in the thinking about the nature of human values. Schwartz et al. (2001) described values as guiding principles of life that influence one’s behaviour. This concept has been largely influenced by Milton Rokeach (1973, 1979).

What values are. As early as the 1960s most social science disciplines focused on researching values and their possible impacts (Hechter, 1993)¹⁰. An early functionalist, deterministic (Lesthaeghe & Moors, 2000) definition of values by Kluckhohn (1951, p.395), covering both individuals and groups and including actions as well as rewards reads: “A value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable, which influences the selection from available modes, means, and ends of action.” In contrast to placing emphasis on the action itself, Rokeach (1973, p.5) defines values as being “enduring beliefs that a specific mode of conduct is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.” Following Hitlin and Piliavin’s (2004) review on the concept of values, the next influential step in conceptualizing values was Schwartz and Bilsky’s (1987, p.551) summary of previous definitions that showed five common features appearing most often: “values are (a) concepts or beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d)

¹⁰ For reviews on the history of values see Edel (1988), in sociology, see Spates (1983), in social theory, see Joas (2000).

guide selection or evaluation of behavior and events, and (e) are ordered by relative importance.” An important contribution to understanding the nature of values was made by Schwartz (1992) who describes values as cognitive-emotive representations of the three universal requirements: (1) biologically based organism needs, (2) social interactional requirements for interpersonal coordination, and (3) social institutional demands for group welfare and survival. Schwartz (1996) describes values as generally not consciously applied to an action. There are four processes that link values to actions: (1) activation of the values (cf. Verplanken & Holland, 2002), (2) values motivate favouring of certain actions over others (cf. Feather, 1992), which in turn leads to (3) values influencing attention, perception, and interpretation within situations and (4) once activated, they influence the planning of actions (Schwartz, 2004b).

What values are not. Hitlin and Piliavon (2004) list four concepts that values are conflated with: (1) attitudes, (2) traits, (3) norms, and (4) needs. Following Rokeach (1973) and Williams (1979), the nature of values is more abstract than those of attitudes. Bem (1979) states that values are a special kind of attitude object and Katz (1960) describes value expression as one of four functions of attitudes. The term halo effect stands for the ability of attitudes to either express or influence the perception of values (Kristiansen & Zanna, 1991). Hitlin and Piliavon (2004) conclude that compared to values, attitudes are situated in a lower place in people’s evaluative hierarchy, are less important regarding personhood (Erickson, 1995; Smith, 1991) and have a greater effect on behaviours (Schwartz, 1996). In contrast to values, traits can be seen as fixed aspects of one’s personality and are often mistaken for value-based behaviour (Hitlin & Piliavon, 2004). The difference, however, is that behaviour and actions based on values are more easily cognitively controllable than traits (Roccas, Sagiv, Schwartz & Knafo, 2002). The authors distinguish between traits being enduring dispositions, which may be positive or negative, and values being enduring goals, which are mostly positive in nature. Rokeach (1973) refers to values as providing a standard for judging

behaviours. They should be seen as constituting people rather than people having fixed traits that could change their personality with changing social conditions. Following Hitlin and Piliavon (2004), norms are situation-based, while values are trans-situational. In contrast to values, which are mainly measured as an individual-level construct, explaining norms typically focus on shared agreements of a group¹¹. Needs distinguish themselves from values by constituting biological influences on human behaviour. In the words of Hitlin and Piliavon (2004, p.362), summarizing Rokeach (1973): “Values serve as socially acceptable, culturally defined ways of articulating needs”.

Antecedents of values. In their review on values, Hitlin and Piliavon (2004) discuss a variety of social categories and their empirical influences on values. In the first category, the authors contextualize values with biology. Although some researchers claim that biological evolution causes changing values in humans (Michod, 1993), Hitlin and Piliavon (2004) argue against that by highlighting the greater speed of cultural evolution compared to its biological counterpart (Tiger, 1993). However, Cavalli-Sforza, Menozzi and Piazza (1993) hypothesize that the preservation of values in humans can be described by both biological and cultural mechanisms. In addition to biology, race can also be related to values. Ball-Rokeach and Loges (1996) for instance argue for the importance of values to understanding literature on racial attitudes such as Schuman’s (1972) article on attitudes versus actions. An example of research that shows differences in value ranking between two races is Rokeach (1973), who found that equality ranked much higher for blacks than for whites. Other more recent studies such as Waters (1990), Ohbuchim, Fukushima and Tedeschi (1999) and Asakawa and Csikszentmihalyi (2000) showed that ethnicity also has an impact on values. According to Xiao (2000) there is not much research available on the impacts of gender on values. Beutel and Marini (1995) for instance found differences on the importance of three values for different genders (compassion, materialism, and meaning) and Xiao (2000) discovered that

¹¹ For a detailed comparison of values and norms, see Marini (2000).

females value autonomy higher than males do. Other examples of gender-based value research include Feather (1984, 1987), Bond (1988) and more recently, Johnson (2002). On the other hand, not all values have proven to be related to gender. Rokeach (1973) for instance, found that value scores for males and females did not differ significantly in regards to items such as world peace, freedom, and honesty. Furthermore Hitlin and Piliavon (2004) review antecedents of values such social class, occupation, education, family characteristics, immigrant status, age cohort, and religion, all of which feature one or the other correlation with the construct of values.

One category of antecedents of values that is of particular interest for this study is *national or demographic* factors. Two approaches of mapping values in the national context are prominent: (1) *individual level* research which refers to mapping changes in value structures of individuals over a period of time, and (2) *cultural level* research comparing values across nations in order to shed light on and explain differences in regard to political, social, economical, and cultural issues.

2.3.2.3 Kluckhohn & Strodtbeck (1961)

In their classic work on values, Kluckhohn and Strodtbeck (1961) developed a model labelled *The Value Orientation Method* that helps to understand cultural idiosyncrasies by examining, comparing and contrasting orientations that underlie human behaviours. Their theory proposes that there are values that guide human behaviour to solve universal problems and that those values differ across cultures. Kluckhohn and Strodtbeck's (1961) theoretical model is based on the work of Kluckhohn (1949, 1951) who argued that shared biological characteristics form a basis for a common culture. Kluckhohn (1951, p.395) defined values as: "A conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means and ends of action." Kluckhohn and Strodtbeck's (1961) interdisciplinary approach to develop their theoretical

model was based on the assumption that the characteristics of cultural values or value orientations can be explained by studying what members of a group consider important and desirable, and what forms the basis of norms and life-styles that are considered appropriate. Value-orientations include normative cognitive, directional as well as affective elements and are therefore a distinct concept from basic values (Carter, 1991). In Kluckhohn and Strodtbeck's (1961) theory value-orientations vary from group to group and can therefore be used to characterize cultural differences not only between groups but also between members of those groups. The authors assumed that value-orientations are a product of a limited number of problems common to all humans and that the way of dealing with these problems differs between cultures. The problems relate to five aspects of human life, as outlined in *Table 1*. Each 'domain' has a number of solutions or alternatives associated with it.

Table 1

Five Domains of Human Life

Time Orientation	<i>On what aspect of time should we primarily focus?</i>
Possible answers:	past, present or future
Man-Nature Orientation	<i>What is the relationship between humanity and its natural environment?</i>
Possible answers:	mastery, submission or harmony
Relational Orientation	<i>How should individuals relate with others?</i>
Possible answers:	hierarchically (which they called 'lineal'), as equals ('collateral'), or according to their individual merit
Activity Orientation	<i>What is the prime motivation for behaviour?</i>
Possible answers:	to express one's self ('being'), to grow ('being-in-becoming'), or to achieve
Human Nature Orientation	<i>What is the nature of human nature</i>
Possible answers:	good, bad ('evil') or a mixture

Adopted from Maznevski, DiStephano and Nason (1995); Maznevski, DiStephano, Gomerz, Noorderhaven and Wu (2002). See also Kluckhohn and Strodtbeck (1961) for original information.

In addition to these five domains, Kluckhohn and Strodtbeck (1961) suggested another value dimension, *space*; however, the authors did not explore it further. The possible answers to these questions proposed by Kluckhohn and Strodtbeck (1961) then reflect the basic orientation of a society depending on the preference they show using them.

2.3.2.4 Rokeach (1973)

Probably the most decisive contribution to the current values concept was made by Rokeach (Munson, 1984). Rokeach (1973) developed the *Rokeach Value Survey* (RVS) to measure value orientations¹². The appurtenant questionnaire consists of 36 items, half of which represent terminal, the other half instrumental values that must be ranked by the respondents according to their importance. Instrumental values refer to single beliefs that are preferable in all situations and their terminal counterparts represent end-states that are worth striving for.

The RVS represented a new way of thinking about the nature of human values. Rokeach's (1973, p.5) definition of the value concept is "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence." Rokeach's values set a standard that allow people to evaluate certain behaviours and therefore guide them, such as taking position on a particular ideology or social issues. His values theory comprises both goals and the instruments needed to obtain the goals.

After publishing *The Nature of Human Values* in 1973, Rokeach's value scales have been used in many empirical studies investigating the role of values in the sociological as well as psychological context (e.g. Heaven, 1993; Kelly, 1990; Weber, 1993). The popularity of Rokeach's approach to measuring value orientation results from the more coherent and psychometrically sound definition and instrumentation of his construct than others available at that time (Kelly, 1990)¹³.

¹² For a thorough discussion of pre-Rokeach value instruments, see Braithwaite and Scott (1991).

¹³ For a review of studies relating Rokeach's values to a multitude of variables such as demographics, attitudes, and behaviours, see Braithwaite and Scott (1991).

2.3.2.5 Hofstede (1980) – Work-related Values

One of the most widely cited authors in the area of value mapping is Geert Hofstede. Values have been used as an instrument to study culture by many researchers (Singelis, Hubbard, Her, & An, 2003). Hofstede's (1980a) classic work on work-related values was a major step in classifying cultures (Leung et al., 2002) and has revolutionized research on culture and international business (Leung et al., 2005). Hofstede (1980a, p.25) defines culture as "the collective programming of the mind which distinguishes the members of one human group from another." Based on large research projects, Hofstede (1980a) identified four independent value dimensions. This multi-dimensional framework is still one of the most widely cited systems for describing cultures.

Hofstede named his value dimensions *individualism-collectivism*, *power distance*, *uncertainty avoidance* and *masculinity-femininity*. His concept was supplemented by the work of the Chinese Culture Connection (1987), which found another dimension conducting research among Chinese people: *Confucian work dynamism*. Subsequently Hofstede (1991) renamed it *short-term versus long-term orientation* after validating the new dimension in a study among students in 23 countries.

Power distance is the degree of inequality which the population of a country considers normal. *Uncertainty avoidance* is the degree to which people in a country prefer structured over unstructured situations. *Individualism* is the degree to which people in a country prefer to act as individuals rather than as members of groups. *Masculinity versus femininity* refers to the degree to which values like assertiveness, performance, success and competition, which in nearly all societies are associated with the role of men, prevail over values like the quality of life, maintaining warm personal relationships, service, care for the weak and solidarity, which are more associated with the role of women (Hofstede, 2005). *Long-term versus short-term orientation* deals with virtue, regardless of truth. "Values associated with Long Term

Orientation are thrift and perseverance; values associated with Short Term Orientation are respect for tradition, fulfilling social obligations, and protecting one's 'face'" (Hofstede, 2005)¹⁴.

Using data from IBM employees, Hofstede characterized value profiles from 53 nations or cultural regions. These five dimensions of culture-level values presented the conceptual framework for many cross-cultural studies in numerous disciplines (Bond, Leung, Au, Tong and Chemonges-Nielson, 2004; cf. Kagitcibasi, 1997). Despite its big influence on value research, Hofstede's work remains controversial (Leung et al., 2005) since it was not designed to study cultural differences, but "for reasons internal to (IBM)" (Hofstede, 1991, p.257)¹⁵. The most influential points of concern are those of Schwartz (1994a), arguing that Hofstede's dimensions are not fully comprehensive, since the reason for his study was not to identify dimensions of national culture, but rather work-related culture and therefore some important questions might not have been included. Additionally, Hofstede's sample did not represent all national cultures and his respondents shared a similar background in terms of education, science and technology and therefore did not represent the general population. Schwartz (1994a) also points out that changes in culture might have appeared since Hofstede collected his data and therefore his dimensions might be outdated. Lastly, it is not clear whether respondents from different cultures understood and interpreted Hofstede's questions in the same way, which is necessary to be able to compare scores across cultures.

Hofstede (1980a, 1991) and others statistically correlated the value dimensions with a variety of country specific indices, as well as other characteristics of these nations to search for significant patterns and hereby validated the work. Examples for such correlations are the association of *individualism* with more wealth and a larger organizational size (Hofstede,

¹⁴ Many studies have confirmed the validity of these dimensions. For an overview of earlier replications, see S ndergaard (1994).

¹⁵ For critique on Hofstede's cultural dimensions see Brett and Okumura (1998), Burgess and Nyajeka (2005), Fang (2003), Schwartz (1994a) and Steenkamp (2001); for a debate on individualism-collectivism, see Oyserman et al. (2002a).

1980a) or correlations between *Confucian work dynamism* and economic growth (Chinese Culture Connection, 1987). More recently Smith et al. (2002) related *power distance* to “a lower reliance on superiors and on formal rules and a higher reliance on self and subordinates for handling events in the workplace” (Bond et al., 2004, p.554)¹⁶.

Individualism versus collectivism. Hofstede’s value dimension individualism-collectivism (I-C) has been of special interest to researchers, and few other constructs in history have enjoyed similar attention (Brewer & Chen, 2007): Hofstede’s I-C distinction has been used extensively to explain cross-cultural differences, particularly in cross-cultural research in psychology. Bond (1994, p.69) even calls the culture-level differences between the two poles of the dimension “a magnetic pull on cross-cultural researchers” and Hui and Yee (1994) report that over thirty percent of all published studies in cross-cultural research use I-C to explain at least parts of their findings on variations across cultures¹⁷.

Hofstede describes individualistic societies as emphasizing ‘I’-consciousness as opposed to ‘we’, meaning their members can be characterized by “autonomy, emotional independence, individual initiative, right to privacy, pleasure seeking, financial security, need for specific friendship, and universalism” (Brewer & Chen, 2007, p.133). The main characteristic of individualism is the independence from each other. Starting with this, there are a number of further elaborations of the concept. Waterman (1984) for instance refers to a high emphasis on freedom of choice and respect for the integrity of other members of the society in his explanation of *normative individualism*, whereas Schwartz (1990) attributes the focus on achieving a particular status to individualistic societies¹⁸.

Collectivist societies on the other hand can be characterized through their focus on the group. Duties and obligations are shared with and decision made in the group. Members of

¹⁶ For a recent review on Hofstede’s framework see Kirkman et al. (2006).

¹⁷ For a recent review of the construct of I-C see Brewer and Chen (2007). For a meta-analysis see Oyserman et al. (2002).

¹⁸ For more detailed definitions of individualism see e.g. Oyserman et al.’s (2002a) meta analysis on the concept of I-C and Triandis (1995).

collectivistic societies identify themselves through the togetherness of the group they belong to. Not all authors agree with the view on collectivism being simply the opposite of individualism, but rather conceptualize it as different ways to look at the world (e.g. Kagitcibasi, 1987, 1997; Kwan & Singelis, 1998). Schwartz (1990) describes members of collectivistic societies as basing their expectations on ascribed statuses. They form in-groups that can, for instance, include family, ethnic or religious groups (Oyserman et al., 2002a) that pursue common goals and are characterized through the same values (Triandis, 1995). Their range of values, attitudes and behaviours might exceed those of individualistic societies (Oyserman, et al., 2002a).

Critique on individualism-collectivism. Recently, a number of scholars raised criticism on the construct of I-C. Particularly the broad structures researchers use to assess these constructs gave reason to describe them as being conceptually fuzzy (Earley & Gibson, 2002) or even not valid at all (Fijneman, Willemsen, & Poortinga, 1995; Fiske, 2002). This is due to a large heterogeneity of definitions of the construct and related scales to measure it (Oyserman et al., 2002a)¹⁹. Many authors called for a refinement of the measurements, particularly for scales that measure each dimension separately²⁰. Some efforts have been made to refine the construct. One of them – differentiating measures of horizontal versus vertical I-C – has been widely accepted by researchers.

Horizontal and vertical individualism-collectivism. According to Singelis, Triandis, Bhawuk and Gelfand (1995) and Triandis (1995), Hofstede's (1980a) I-C individual level value dimension can be split up into two distinct components: horizontal and vertical I-C. Triandis (1995) proposes that the vertical dimension stands for people favouring inequality for its benefits, devoting their services to the in-group. The horizontal dimension, on the other

¹⁹ For a recent assessment of the limitations of the individualism-collectivism model of culture see Bond (2002), Fiske (2002), Kitayama (2002), and Miller (2002) as well as Oyserman et al. (2002a).

²⁰ e.g. Bond, 2002; Fiske, 2002; Ho & Chiu, 1994; Oyserman et al., 2002a; Triandis, Bontempo, Betancourt, Bond, Leung, Brenes et al., 1986; Triandis & Gelfand, 1998

hand, can be attributed to people who value equality between the members of their in-group, for instance regarding their status and rank. Applying this to collectivistic societies who are characterized by their members feeling a part of the group, those who are labelled as vertical collectivistic accept inequalities within the collective (Cukur, De Guzman, & Carlo, 2004). Vertical individualists, although focusing on an autonomous self-concept, also accept inequalities in status (Singelis et al., 1995).

Despite being criticised by several authors, a recent review on the construct of I-C by Schimmack, Oishi, and Diener (2005) confirms its general validity. The authors refer to I-C as an important dimension that can be used to characterize cultural differences and conflicting findings are rather results of badly used methodology.

2.3.2.6 Schwartz (1992)

Schwartz (1992, p.4) explains the nature of values as following:

“Values represent, in the form of conscious goals, three universal requirements of human existence to which all individuals and societies must be responsive: needs of individuals as biological organisms, requisites of coordinated social interaction, and survival and welfare needs of groups.”

In other words, to survive and function effectively, every human is “confronted with a set of universal problems” (Leung & Bond, 2004, p.131). “[A]lthough people differ substantially in the importance they attribute to values – values are organized by a common structure of motivational oppositions and congruities for most literate adults across cultures” (Schwartz, Melech, Lehmann, Burgess, & Harris, 2001, p.523).

Deviating from the work of Hofstede and Trompenaars, Schwartz (1992, 1994a) differentiates strictly between cultural-level and individual-level analysis in his approach of finding cultural differences. One can also find a distinct difference between *value types* and *dimensions* in his work. Types of values are usually made up of two or more values that can

be combined into an evocative group. Together with the value type formed by opposing values, two value types form a value dimension. Schwartz (1992) explains values as being cognitive representations of abstract goals that are desired by humans and provide guidelines in their lives. This, he argued, is valid for people from diverse cultural backgrounds since the problems humans face are universal. His multinational research supports this. With his mapping of cultures using results from studies in 41 cultural groups (Schwartz, 1992, 1994a), Schwartz provides a widely recognized model for scholars spanning various disciplines. Probably the biggest difference in the work of Schwartz (1992) compared to other value constructs such as Rokeach (1973) is that Schwartz did not find evidence for the distinction between instrumental and terminal (means and ends) values. Schwartz's model consists of values that express both motivations for means and ends. Although Schwartz's work is very much influenced by Rokeach – his list of values even draws items from the RVS – there is a difference in that Schwartz does not ask his respondents to *rank* values (putting different values in competition to each other) but has them *rating* the items on a 9-point scale as 'a guiding principle in life', allowing items to be equally important to respondents. Schwartz (1994b) justifies using the rating over the ranking approach by its usefulness in terms of statistic properties that allows the use of more items. In addition, respondents may not be able to see contradictions between values and by not forcing them to rank items, bias in the results can be avoided.

Schwartz's ten basic types of values. Schwartz (1992) obtained ten distinct values that include all other values previously recognised in culture studies around the world. These are based on three universal requirements of the human condition: (1) needs of individuals as biology organisms, (2) requisites of coordinated social interaction, and (3) survival and welfare needs of groups.

Using more than 60 000 sets of individual data from 67 countries, ten value types at the individual level have been identified (Fontaine & Schwartz, 1996; Schwartz, 1992, 1994a, 1999, 2003a; Schwartz & Sagiv, 1995). Each of these is represented by a number of values and can be characterized by its central motivational goal (See *Table 2*). The order of the value types matches the pan-cultural hierarchy described in Schwartz and Bardi (2001) that is based on shared underlying principles²¹.

Table 2

Schwartz's Ten Basic Types of Values

Value Types	Definition	Example of representing values
<i>Benevolence</i>	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Helpful, honest, forgiving, loyal, responsible
<i>Self-direction</i>	Independent thought and action-choosing, creating, exploring.	Creativity, freedom, independent, curious, choosing own goals
<i>Universalism</i>	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature.	Broadminded, wisdom, social justice, equality, a world at peace, a world of beauty, unity with nature, protecting the environment
<i>Security</i>	Safety, harmony and stability of society, of relationships, and of self.	Family security, national security, social order, clean, reciprocation of favours
<i>Conformity</i>	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.	Politeness, obedient, self-discipline, honouring parents and elders
<i>Achievement</i>	Personal success through demonstrating competence according to social standards.	Successful, capable, ambitious, influential
<i>Hedonism</i>	Pleasure and sensuous gratification for oneself.	Pleasure, enjoying life, self-indulgence
<i>Stimulation</i>	Pleasure and sensuous gratification for oneself.	Daring, a varied life, an exciting life
<i>Tradition</i>	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self.	Humble, accepting my portion in life, devout, respect for tradition, moderate
<i>Power</i>	Social status and prestige, control or dominance over people and resources.	Social power, authority, wealth, preserving my public image

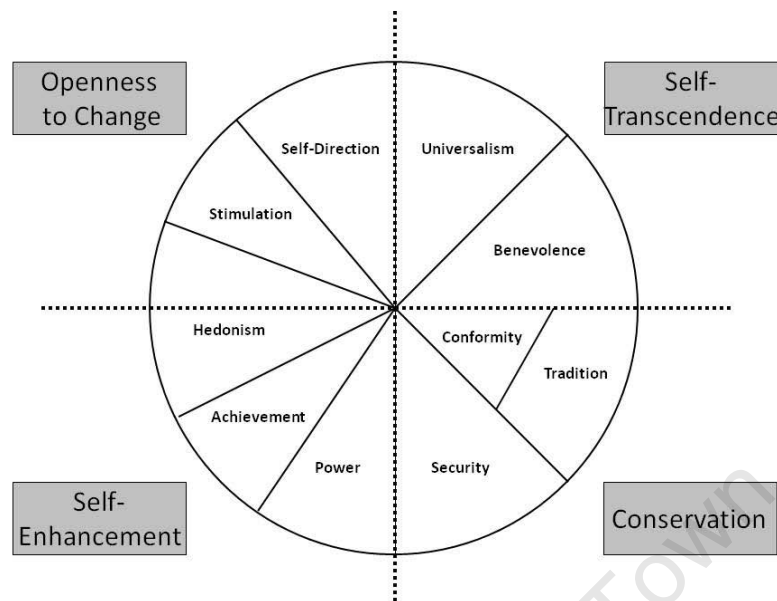
Adopted from Schwartz et al. (2001), p.521, Table 1.

²¹ For details on the derivation of the ten basic values see Schwartz (1992, 1994a, 2003a) and Schwartz and Bilsky (1990). Cross-cultural relations between Schwartz's values and many behaviour, attitude and personality variables are reported in the citations of Schwartz and Bardi (2001).

The circular structure of Schwartz's values. Once the ten motivational basic values were identified, Schwartz (1992) outlined dynamic relations among them. Using smallest space analysis (Guttman, 1968) to analyse spatial relationships between his values, Schwartz (1992) developed a circumplex structure that organises the ten value types. This structure portrays the relations between the value types in terms of their conflicts and congruities. The circular arrangement represents the similarity of the underlying motivations of the value types. The closer two values are situated on the circle, the more similar they are. The opposite is true for distant value types. In other words, people who score high on values included in value types on the one side are likely to score low on values included in value types on the opposite side. Schwartz's theory has proven to be valid in a wide range of cultures (Schwartz, 1992; Schwartz & Boehnke, 2004) and relationships to various variables have been reported (e.g. Barnea & Schwartz, 1998; Schwartz, Sagiv, & Boehnke, 2000). As the model outlined in *Figure 2* shows, the structure of the values is quasi-circular since the separate values are arranged in a circle but the spaces between them are not equal (for details, see Schwartz & Boehnke, 2004).

Put into a circular model, the ten types of values can be sorted into four higher-order value types: *openness to change* combines the value types of 'self-direction', 'stimulation', and a part of 'hedonism'. 'Hedonism', together with 'achievement' and 'power', is also part of the value type *self-enhancement*. On the right hand side of the model *self-transcendence* combines 'universalism' and 'benevolence' and *conservation* grouping 'security', 'conformity', and 'tradition'. Tradition is located outside of conformity because the two types are empirically distinct from each other, whilst sharing the same motivational goal.

Figure 2
The Structure of Schwartz's Values



Adopted from Schwartz (1992)

Self-enhancement versus self-transcendence, and openness to change versus conservation form two bipolar conceptual dimensions representing their negative correlation within the model (Schwartz et al., 2001). Dividing the quasi-circular structure of the ten values, Schwartz (1992) formed a two-dimensional space that stands for two fundamental human problems (Rohan, 2000; Schwartz, 1992). The basic structure of Schwartz's value types subsequently has been validated with samples from 67 nations (Fontaine & Schwartz, 1996; Schwartz, 1992, 1994a, 2003a; Schwartz & Sagiv, 1995).

The advantage of such a system is that once a relationship between a value and an attitude, opinion, or behaviour has been found, the adjacent values, as well as structurally opposed values, is likely to be related, too. Having a circular structure allows the model to relate value priorities to other variables. Schwartz (1992) describes the relations between the different values as a sinusoidal curve that maps the values around the circle. For the items, this means that they correlate more highly with those measuring the same value and less with

items measuring different values. The values can be seen as latent factors formed by the corresponding items and only these are related in a circular manner. Schwartz's scheme found cross-cultural support in developed western nations, as well as in the Far East and South America (Schwartz, 2004b).

Values equal behaviour. The structure of relations among Schwartz's ten value types can be described as near-universal (Schwartz & Bardi, 2001). Although the importance individuals and groups attribute to the values that make up the ten value types can differ a great deal, their values are organized in the same coherent structure of oppositions and compatibilities of motivations (Schwartz, 1992, 1994; Schwartz & Sagiv, 1995). Self-reports of individuals are the common method to measure value hierarchies. However, one has to be careful as to whether these self-reports "reflect lip service to values rather than true endorsement" (Schwartz & Bardi, 2001, p.271). The authors list the following sample of behaviours and behavioural intentions that show a relationship to values measured with Schwartz's items in order to confirm the meaningfulness of values regarding behaviours²².

Table 3
Behaviours and Behavioural Intentions

choice of medical specialty	environmental behaviour
choice of university major	inter-group social contact
consumer purchases	occupational choice
cooperation and competition	religiosity
counselee behavioural style	religious observance
delinquent behaviour	voting

Adopted from Schwartz & Bardi (2001, p.271).

²² Bardi & Schwartz, 2003; Barnea & Schwartz, 1998; Bianchi & Rosova, 1992; Bond & Chi, 1997; Duriez, Luyten, Snauwaert, & Hutsebaut, 2002; Feather, 1984; Grunert & Juhl, 1995; Helkama, Uutela, & Schwartz, 1992; Karp, 1996; Kasser, Koestner, & Lekes, 2002; Puohiniemi, 1995; Roccas, Sagiv, Schwartz, & Knafo, 2002; Roccas & Schwartz, 1997; Ros, Grad, & Alvaro, 1994; Sagiv, 1997; Sagiv & Schwartz, 1995; Schubot, Eliason, & Cayley, 1995; Schwartz, 1996; Schwartz & Barnea, 1995; Schwartz & Huismans, 1995; Srnc, 1995; Struch, Schwartz, & van der Kloot, 2002; Verkasalo, Daun, & Niit, 1994

Pan-cultural hierarchy of value types. Schwartz and Bardi (2001) found that there is a pan-cultural hierarchy underlying the importance individuals and groups attribute to the ten basic value types. Analysing results from several studies, the authors outline the hierarchy as following: at the top of the value hierarchy stands benevolence, followed by self-direction and universalism. In the middle of the hierarchy, one finds security, conformity and achievement, followed by hedonism. At the end of the list are the value types stimulation, tradition and power. Although there is a high similarity of the average importance humans attribute to the basic value types, it is important to understand that individual and group value ratings can still differ in a reliable and meaningful way. Studying these differences that stem from systematic variations in social experience (Kohn & Schooler, 1983; Rokeach, 1973) is important since it has and will reveal variations in the importance individuals as well as groups attribute to certain values; this variation can be related to and explain individual behaviour (Feather, 1975; Rokeach, 1973; Schwartz, 1996; Seligman, Olson, & Zanna, 1996). Schwartz and Bardi (2001) on the other hand value the focus on differences, but also point out the possible insights arising from studying similarities. The insight the authors highlight is that a common pan-cultural structure of value-types has been revealed. It has been statistically proven that societies do have a common baseline when rating the importance of different types of values. This value hierarchy reflects basic requirements of societal functioning namely “cooperative and supportive primary relations, productive and innovative task performance, and gratification of self-oriented needs and desires” (Schwartz & Bardi, 2001, p.287). Only with the knowledge of the existence of a normative hierarchy is it possible to understand the distinctiveness of value priorities of members of a group or society. The hierarchy of Schwartz’s (1992) ten value-types builds the base of shared human values and helps to explain value differences caused by individual behaviours²³.

²³ For a detailed discussion of the theoretical background to the hierarchy of value-types and why, for instance, some African samples diverge from this order, see Schwartz and Bardi (2001).

Measuring values – the Schwarz value survey. Until recently, all studies that support Schwartz's values theory employed a single method of measurement, namely Schwartz Value Survey (SVS). It is currently the most widely used method for the study of individual differences in values by cross-cultural and social psychologists (Schwartz et al., 2001).

To be able to measure people's value preferences, Schwartz (1992) developed the SVS. In his questionnaire, respondents are asked to assess the importance of 57 single-value items, regarding their significance to them as guiding principles of life. The values have been selected to represent the ten value-types as described before. The meaning of each item is separately specified by an explanatory phrase. The importance of the abstract concepts is then rated by the respondents using a scale from -1 (*opposed to my principles*), 0 (*not important*), 3 (*important*), to 7 (*of supreme importance*) (Schwartz et al., 2001). After respondents rate the value items according to their importance, the average scores on each of the ten value-types can be calculated.

The original SVS. Originally, Schwartz (1992, 1996) proposes the use of 57 items for the ten value-scales. For a better cross-cultural comparison, he suggests including only 45 of those items, namely those that show the best intercultural stability. Sorted by the value-types, *Table 4* shows the related values.

Table 4

Values Representing Schwartz's Value Types

<i>Benevolence</i>	helpfulness, honesty, forgiveness, loyalty, responsibility
<i>Self-Direction</i>	creativity, freedom, curiosity, independence, choosing one's own goals
<i>Universalism</i>	broadmindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection
<i>Security</i>	national security, family security, social order, cleanliness, reciprocation of favours
<i>Conformity</i>	obedience, honouring parents and elders, self-discipline, politeness
<i>Achievement</i>	success, capability, ambition, influence on people and events
<i>Hedonism</i>	gratification of desires, enjoyment in life, self-indulgence
<i>Stimulation</i>	daring, a varied and challenging life, an exciting life
<i>Tradition</i>	respect for tradition, humbleness, accepting one's portion in life, devotion, modesty
<i>Power</i>	social power, authority, wealth

Adopted from Schwartz (1996).

The short SVS. Researchers working with the SVS have called for an abbreviated scale to measure Schwartz's values, which is more suitable for combinations with other instruments without being overly time-consuming (Grunert & Juhl, 1995). With the goal to provide a useful method to screen "what people regard important in their lives" (Lindeman & Verkasalo, 2005, p.178), Lindeman and Verkasalo (2005) propose a shortened version of the SVS, the Short Schwartz's Value Survey (SSVS), which consists of ten items, each of them measuring one of the ten value-types. Using a set of four studies, the authors localized the items and tested their reliability and correlation with the original SVS. They also investigated the quasi-circular structure of Schwartz's value-types and found their results consistent. Lindeman and Verkasalo (2005) suggest their SSVS to give insight in broad values in contrast to the specific values measured with the SVS since single-item measures are discouraged in psychological research for their inability to calculate internal consistency coefficients.

The Portrait Value Questionnaire. The results of any value measurement can be influenced by external factors such as context or environment. Seligman and Katz (1996), for instance, report situational variability of the ranking of values such as freedom and wisdom, if

respondents were primed with certain views on other topics. The authors explained the varying results by the activation of different value systems in the respondents relating to context. Hitlin and Piliavin (2004) suggest that this is the case with the SVS and its abstract nature. With regard to this problematic, Konty (2002) developed a scale that measures values and is sensitive to contextual concerns.

In addition to concerns with context and environment influencing the outcome of value priorities, people's awareness of their values can also play a role. Although Rohan (2000), Rokeach (1973) and Schwartz (2004b) describe values as consciously representing one's needs, people might not always be aware of what their values are (Hechter, 1993) or what they mean (Waters, 1990). Furthermore, it might be difficult for less literate people to understand abstract issues such as value-descriptions without context (Hitlin & Piliavin, 2004).

The SVS presents the respondent with value concepts independent of any specific context. Therefore, it requires a high level of abstract thinking. For respondents with a lower level of education or an education that does not emphasize abstract thinking, "evaluating and quantifying the guiding principles in their life" (Schwartz et al., 2001, p.522) is intellectually demanding. For this reason, Schwartz (2003a), Schwartz, Lehmann, and Roccas (1999) and Schwartz et al. (2001) developed the *Portrait Value Questionnaire* (PVQ), a shorter instrument that measures the same ten value constructs as the SVS, but uses a more concrete way of asking, by presenting the respondents with a specific life context within which to weigh his/her application of values. This less cognitively complex way of responding makes the PVQ more suitable for segments of the population with little or no formal education (Schwartz et al., 2001).

The Portrait Value Questionnaire derives its name from its short verbal portraits of people that illustrate their personal "goals, aspirations, or wishes that point implicitly to the

importance of a value” (Schwartz et al., 2001, p.523). Respondents are asked to evaluate to which level they can identify themselves with the described person and rate it on a 6-point scale ranging from 6 (*very much like me*) to 1 (*not like me at all*). In that way, a respondent’s own values can be concluded from their self-reported similarity to people who are described in terms of particular values (Schwartz et al., 2001). The reliability of this measurement method has been proven with participants from various countries and cultural backgrounds, e.g. South Africa, Uganda, Italy and Israel (Schwartz et al., 2001).

Schwartz’s seven culture-level dimensions. Being based on a conceptualization of values and because of its systematic sampling, measurement and analysis techniques based on recent data, Brett and Okumura (1998) refer to Schwartz’s work on culture-level value dimension as superior to Hofstede’s.

Using the results of the individual-level analysis, Schwartz (1994a, 1999) validates seven value types on the cultural level, utilizing multidimensional scaling of the national means (*Table 5*). Being able to identify cultural differences, Schwartz summarizes the seven types in three dimensions: *embeddedness* (previously called conservatism) versus *autonomy*, *hierarchy* versus *egalitarianism*, and *mastery* versus *harmony* (Smith et al., 2002).

Table 5
Schwartz’s Culture Level Value Types

<i>Embeddedness</i>	emphasizes maintaining the status quo, propriety, and restraint of actions or inclinations that might disrupt the solidarity group or the traditional order in which people are embedded.
<i>Intellectual autonomy</i>	emphasizes the desirability of individuals pursuing their own ideas and intellectual directions independently.
<i>Affective autonomy</i>	emphasizes the desirability of individuals pursuing affectively positive experience.
<i>Hierarchy</i>	emphasizes the legitimacy of an unequal distribution of power, roles, and resources.
<i>Egalitarianism</i>	emphasizes transcendence of selfish interests in favour of voluntary commitment to promoting the welfare of others.
<i>Mastery</i>	emphasizes getting ahead through active self-assertion.
<i>Harmony</i>	emphasizes fitting harmoniously into the environment.

Adopted from Schwartz (2004b).

Results on the mean importance for each value-type for 38 countries and cultural groups have been reported by Schwartz (1994a). More recently, Schwartz (2004c) has published results for 67 national groups. National scores on Schwartz's cultural value-dimensions have been used to explain and predict a variety of cultural differences and work-related issues (e.g. Smith et al., 2002; Smith, Trompenaars, & Dungan, 1995).

2.3.2.7 Smith, Dugan & Trompenaars (1996) – Culture-level Dimensions

Trompenaars and Hampden-Turner (1997) used a mix of behavioural- and value-patterns in order to classify culture. The Trompenaars database consists of responses to questions about preferred behaviour in a number of leisure and work situations, with more than 11 000 employees of different organizations in 46 countries.

Similar to Hofstede's (1980a) dimensions of culture, Trompenaars (1993) identified seven value orientations, namely: universalism versus particularism, individualism versus collectivism, neutral versus emotional, specific versus diffuse, achievement versus diffuse, different attitudes towards time and different attitudes towards the environment.

Smith et al. (1996) used data of the Trompenaars database to identify the two reliable country-level dimensions: *egalitarian commitment versus conservatism* and *utilitarian involvement versus loyal involvement*. Following Schwartz's earlier use of these terms, egalitarian commitment stands for the endorsement of "abstract principles of what is right and just" (Smith et al., 2002, p.193-194) whereas conservatism is the preference of one's "immediate circle to outsiders" (Smith et al., 2002, p.194). The contrast between "involvement in the organization that is contingent on meeting one's individual goals, with involvement [that] is based on a long-lasting identification with the organization's goals as one's own" (Smith et al., 2002, p.194) is represented by the second dimension, *utilitarian involvement versus loyal involvement*.

Smith et al.'s (1996) work does not seem to be completely independent but rather includes a number of Trompenaars' dimensions. Similar to Hofstede's work, critics of Trompenaars and Hampden-Turner's work refer to its reliance on data from a large number of executives from different organizations.

2.3.2.8 House and Associates (2003) – Project GLOBE

House et al. (2003) coordinated a research project identifying nine cultural dimensions, namely (1) *performance orientation*, (2) *assertiveness orientation*, (3) *future orientation*, (4) *humane orientation*, (5) *institutional collectivism*, (6) *family collectivism*, (7) *gender egalitarianism*, (8) *power distance*, and (9) *uncertainty avoidance*. This major study – named *Project GLOBE* – includes 62 countries and adopted a theory-based approach, meaning that the dimensions were formulated *a priori*. Their theoretical approach was based on Hofstede's cultural dimensions, values adopted from Kluckhohn and Strodtbeck (1961) and McClelland (1961), as well as on interpersonal communication literature (Sarros & Woodman, 1993). One difference to other studies was the inclusion of leadership behaviours. According to Bond, Leung, Au, Tong, deCarrasquel et al. (2004) some of House's nine dimensions of culture are directly related to Hofstede's (1980a, 2001) four dimensions. For example (2) *assertiveness orientation* and (7) *gender egalitarianism* are related to *masculinity-femininity* and (8) *power distance* and (9) *uncertainty avoidance* are directly related to Hofstede's dimensions of the same names. (1) *Performance orientation* seems conceptually related to the concept of *need for achievement* (McClelland, 1961) and (4) *humane orientation* is related to Kluckhohn and Strodtbeck's (1961) dimension *human nature is good versus bad*²⁴.

²⁴ A complete description of the project has now been published in House et al. (2004). For critique on the Project GLOBE, see Hofstede (2006); for comparisons between Hofstede's work and GLOBE see Smith (2006) and Javidan, House, Dorfman, et al. (2006).

2.3.2.9 Inglehart (2003) – European/World Values Survey

Inglehart's *European/World Values Survey*, which measures attitudes, values, and beliefs, and represents 80 percent of the world population (Welzel et al., 2003), was used to identify two new dimensions: *traditional versus secular-rational orientations* and *survival versus self-expression* values (Inglehart & Baker, 2000). The two dimensions have since been used by other researchers to support their work²⁵. Problematically, the first dimension, *traditional versus secular-rational orientations*, is exclusively defined by five values. Self-descriptions, behavioural self-reports and a norm in the measure of the second dimension, makes Inglehart's approach one that is "conceptually scattered" (Bond et al., 2004, p.552).

2.3.3 Beyond Values – General Beliefs

Reviewing the previous attempts to explain cultural difference, one can clearly see the dominant position of values in cross-cultural research. In this section, a different construct with the purpose to yield information about cultural variations that are not explained by values will be reviewed, namely general beliefs. Beliefs, which relate to various social behaviours (Fraser & Gaskell, 1990; Furnham, 1988), do not only help to detect so far unknown cultural variations, but also serve to complement and validate the value constructs (Leung, Bond, & Schwartz, 1995).

2.3.3.1 Beliefs in Social Psychology Research

Beliefs play a key role in social sciences such as psychology, political sciences, anthropology, and sociology. Rokeach (1973) defines three types of beliefs: (1) *descriptive beliefs*, also called *existential beliefs*, which can either be true or false, (2) *evaluative beliefs*, which evaluate whether something is good or bad, and (3) *prescriptive and proscriptive beliefs*, which judge the desirability of means or end-states. The third group includes values as a very specific representative of these beliefs (Burgess, 1992).

²⁵ cf. Inglehart & Baker (2000) - modernization theory; Welzel et al. (2003) - societal-level theory of human development

Leung and Bond (2004) used Bar-Tal (2000) to give a historical review of the framework of beliefs from a different point of view, grouping them into four categories. Usually being context specific and studied in a particular context, *shared beliefs* (1), which refer to the social character of beliefs, reflect the way “people construct their social world to seek meaning and understanding of social realities” (Leung & Bond, 2004, p.123). Sharing the same construction gives them a common social identity and makes communication and interaction between people easy. Implicit or *lay theories* (2) refer to understandings of how the social world functions. They help people to navigate through their everyday life and are regularly articulated as beliefs. Lay theories in connection with beliefs have been studied extensively; nevertheless so far no general framework has been developed that provides a context-free structure of these beliefs. Another line of work that is not able to offer a general, context-free framework is (3) the *process models of beliefs*. Process models of beliefs are related to lay theories with regard to “the processes underlying the formation and change of beliefs” (Leung & Bond, 2004, p.125) and are connected to attitude research, since beliefs are an important component of attitudes. Lastly, beliefs can be used to predict as well as explain social behaviour. Traditionally, beliefs regarded as variables of (4) *individual differences* have been broadly used in this context in form of belief scales. One widely known concept is that of locus of control (Rotter, 1966), which refers to one’s ability to control events happening to oneself. Locus of control is one of the few examples of belief scales that are not integrated with behaviours and values and can therefore be used to develop unambiguous theoretical models. A complete review on the four categories, *shared beliefs*, *lay theories*, *process models of beliefs*, and *individual differences* can be found in Leung and Bond (2004).

One can clearly see that value dimensions have strongly dominated cross-cultural research within the last decades. To be able to explain cultural differences that cannot be detected by the value-construct and to verify and complement results based on values, beliefs play an important role. For example Spector (1982), Furnham (1988) as well as Fraser and

Gaskell (1990) found relationships between beliefs and different social behaviours. Sigel, McGillicuddy-DeLisi and Goodnow (1992) brought parental beliefs in connection with parenting behaviour, and Wrightman (1992) researched general beliefs about the human nature and their relationship to interpersonal behaviours. Leung et al. (1995) used beliefs to research specific individual behaviour across cultures.

2.3.3.2 Social Axioms – A Basic Psychological Construct

As values are clearly the most influential perspective to define cultures and explain differences in social behaviour, Singelis et al. (2003) call for additional dimensions to help understand cultural variations. Values are conceptualized as generalized beliefs that refer to transsituational goals in life (Schwartz et al., 2001). However, not all behaviour is goal-oriented (e.g. Locke & Latham, 2004). Leung and Bond (2004) reviewed the major research in the line of beliefs and found that, although very detailed, most of the findings are tied to a specific context. So far, no framework or theoretical scheme has been developed structuring beliefs in a coherent way. One of their major goals in social axiom research was “to identify a pan-cultural structure of broad, context-free beliefs and to examine how this structure is related to a wide range of social behavior” (Leung & Bond, 2004, p.127).

Defining beliefs. Leung et al. (2002, p.288) conclude that beliefs typically refer to perceived relationships “between two objects or concepts, and that the perceived strength of the relationship may vary across individuals”, and list the following three definitions of beliefs as being representative:

- (1) A description and perception of an object, its characteristics, and its relationship with other objects (Katz, 1960).
- (2) If a man perceives some relationship between two things or between something and a characteristic of it, he is said to hold a belief (Bem, 1970, p.4).
- (3) A proposition to which a person attributes at least a minimal degree of confidence. A proposition, as a statement about an object(s) or relations between objects and/or attributes, can be of any content (Bar-Tal, 1990).

Social axioms – context-free general beliefs. In contrast to the numerous beliefs that are specific in nature, and only apply to a small number of situations, some beliefs are very general and show a high level of abstraction. Rotter's (1966) concept of locus of control can be characterized as such a generalized expectancy. These general beliefs are labelled by Leung et al. (2002) as social axioms. The authors justify the name by pointing at the nature of mathematic axioms that are basic premises that people endorse. Social axioms are assumed to be true without being scientifically validated. They result from personal experiences and socialization and are vital for human functioning and survival (Katz, 1960; Kruglanski, 1989). Leung et al. (2002, p.288) state that social axioms are general, context-free beliefs, fundamental to humans' belief systems and that they serve four major functions of attitudes: they "facilitate the attainment of important goals (instrumental), help people protect their self-worth (ego-defensive), serve as a manifestation of people's values (value-expressive), and help people understand the world (knowledge)".

Until recently, values dominated cross-cultural research at a national level (Bond et al., 2004). To broaden the conceptual tools used in cross-cultural analysis, Leung et al. (2002) propose to use general beliefs or social axioms to increase value-based cultural dimensions. These general beliefs, which differ from values as they can vary widely along the continuum of specificity (Hahn, 1973), can be seen as similar to *general expectancies*, characterizing *locus of control*, a concept introduced by Rotter (1966). Their high level of abstraction makes them likely to "relate to social behaviors across a variety of contexts, actors, targets, and time periods" (Leung et al., 2002, p.288). Referring to the large variety of functions social axioms serve, Leung and Bond (2004) describe them as fundamental psychological constructs that show links to other constructs such as values, domain-specific efficacies (Bandura, 2002) and beliefs about what causes and solves certain psychological problems (Luk & Bond, 1992). The current position on social axioms is that they are general, context-free beliefs about oneself, the social and physical environment, or the spiritual world (Leung et al., 2002).

People hold them because of their socialization experiences and they are central to anyone's cognitive functioning and belief system (Leung et al., 2002). A functionalist approach has been adopted, following other work in the field of attitudes (Katz, 1960; Kruglanski, 1980) that assumes that social axioms are related to both human functioning and surviving. Because of this broad range of functions, social axioms are considered to represent fundamental psychological constructs (Leung & Bond, 2004). Social axioms research is able to provide mechanisms for "explaining personal outcomes, interpersonal exchanges and environmental events, both human and physical" (Leung & Bond, 2004, p.131).

Defining social axioms. Due to their functionality and the universality of the problems people have to cope with to survive (Schwartz, 1992), social axioms are assumed to be pan-cultural (Leung et al., 2002). Beliefs are typically defined in such a way that they refer to a perceived relationship between either two objects or concepts and that the strength of this relationship may vary across individuals (cf. Bar-Tal, 1990; Bem, 1970; Katz, 1960). Based on the definitions of beliefs, Leung et al. (2002, p.289) formally define social axioms as "generalized beliefs about oneself, the social and physical environment, or the spiritual world, [that] are in the form of an assertion about the relationship between two entities or concepts".

As a result of personal experiences and socialization, such general beliefs are assumed to be true (Singelis et al., 2003). Following Leung et al. (2002), social axioms have the structure A is related to B, where A and B can be any entities and their relationship can be causal or correlational. This differs from values insofar as, according to Leung et al. (2002, p.289), values assume the form: "A is good/desirable/important". One can make a further distinction between A being good/desirable (attitude) and A being important (value). Leung et al. (2002) call it a social axiom if the 'desirability pole' of such an evaluative belief is specified and each statement refers to a relationship between two concrete entities. As an

example, Leung and Bond (2004, p.129) explain the axiom ‘hard work leads to reward’ like this:

This belief statement “asserts that a causal connection exists between labor and positive outcomes for the laborer. It is a general statement, because there are many forms of “hard work” just as there are many types of “reward”. It is not an attitude or a value, since the respondent is not assessing the desirability either of “hard work” or “reward”. Axioms claim truth-for-the-actor; they do not assess desired goals”.

Since previous research often fails to distinguish between social axioms, values and normative beliefs and various scales consist of a mix of these constructs (see for instance the belief scales included in Robinson, Shaver, & Wrightsman, 1991), *Table 6* presents a clear overview including examples.

Table 6

Social Axioms, Values and Normative Beliefs

Norm (often expressed as normative belief, prescriptive in nature; prescribes a proper course of action)

A should do X, where A is a person and X is an act.

Examples: we should protect our environment; one should always be willing to admit mistakes

Evaluative Belief (could be classified as value or attitude)

Attitude

A is good/desirable

Example: health is good

Value

A is important

Example: family is important

Social Axiom

A is related to B, where A and B can be any entities and their relationship can be causal or correlational

Examples: good health leads to success in work; hard work leads to reward

Adopted from Leung and Bond (2004) and Leung, et al. (2002).

Values, which often serve as motivation that guides people in their effort to focus on achieving what is important to them, point out people’s priorities in life (e.g. Rokeach, 1972; Schwartz, 1996). Although also serving as general guidelines for people’s behaviours and choices, axioms are not based on self-prescription (Leung et al., 2007). Both constructs differ in the way they operate. In the words of Leung et al. (2007, p.94) “[v]alues provide the ‘what’

answer, in a sense that they define what one should pursue, be it wealth or social justice. Axioms provide the ‘how’ answer, because how one construes the social world bear on the strategies and actions adopted for goal achievement”. Despite this major difference, values and social axioms are not entirely independent constructs, but show some linkages that can be explained by the fact that motivational and cognitive processes do have an influence on each other (e.g. Jost et al., 2003; Strack & Deutsch, 2004).

2.3.3.3 *Dimensions of Social Axioms*

In order to compile a complete list of social axioms, Leung and Bond (2004) started with psychological literature on beliefs that were extracted from three volumes of survey instruments that contained more than 300 scales (Miller, 1991; Robinson et al., 1991; Stewart, Hetherington, & Smith, 1984). All items were included that were consistent with the authors’ definition of social axioms. Input from other cultural sources such as proverbs, newspaper reports, cultural stories, and structured interviews were used to supplement the data. Overall, more than 3 000 items were identified within the different cultures. After dropping obvious repetitions and rewriting to make the beliefs context-free, Leung and Bond (2004) were able to group the items into four broad categories, namely: (1) psychological attributes, (2) orientation toward the social world, (3) social interaction, and (4) environment, and subsequently into 33 sub-categories. 182 axioms were finally identified and clearly phrased in simple terms.

A global study of social axioms. Leung et al. (2002) developed the Social Axiom Survey (SAS) to identify universal dimensions of culturally related social beliefs. Using Factor analysis, five factors or dimensions were identified at five different sites (Hong Kong, Venezuela, the USA, Japan, and Germany) and subsequently confirmed in other studies (cf. Singelis et al., 2003): (1) control by fate, (2) reward for application, (3) social cynicism, (4) spirituality (later renamed to religiosity in Leung & Bond, 2004), and (5) social flexibility.

These studies have also confirmed the universal nature of the five dimensions and have shown variations in the relative endorsement of the factors amongst different cultures (Singelis et al., 2003). The five factors have shown to be capable of predicting social behaviours such as vocational interests, styles of conflict resolution and ways of coping (Bond et al., 2003).

The five dimensions in detail. The five dimensions of social cynicism, social complexity, reward for application, religiosity and fate control are universal in nature (Leung & Bond, 2004). “They reflect the basic human issues of whether social life will bring positive outcomes, whether spiritual beliefs and religious practices are true and useful, whether individual enterprise yields benefits, whether fate predicts future events, and whether the course of interpersonal events follow simple or complicated rules” (Leung & Bond, 2004, p.181).

In order to be able to formulate the hypotheses underlying this study, it is necessary to be familiar with the meanings of the different dimensions of social axioms. Leung and Bond (2004) and Leung et al. (2002) discuss the different dimensions and their connotations based on the content of the items defining them, as well as findings from previous research and their conceptual links. *Table 7* summarizes the discussions.

Table 7

Five Dimensions of Social Axioms

<p><i>Social Cynicism</i></p> <p>“Kind-hearted people usually suffer losses.”</p>	<p>Many of the 11 items defining this social axiom dimension relate to the effects of power or authority originating from wealth or age, leading to the belief that it is useless to show goodwill towards others. Cynicism leads back to Machiavellianism (Christie & Geis, 1970), the belief that manipulation leads to getting ahead of others. It represents a negative view of human nature, especially as it is easily corrupted by power, a biased view against some groups of people, a mistrust of social institutions, and a disregard of ethical means for achieving an end. Fu et al. (2004) describe people endorsing cynicism as likely to apply aggressive and directive tactics in order to succeed. It is unlikely that they change their behaviour unless they are forced to.</p>
<p><i>Social Complexity</i></p> <p>“People may have opposite behaviours on different occasions.”</p>	<p>Social complexity suggests that there are no rigid rules, but rather multiple ways of achieving a given outcome and that apparent inconsistency in human behaviour is common. Individual behaviour can vary over time and context. People who score high on this social axiom dimension believe that the future cannot be predicted by present outcomes and there is no transparency in the underlying logic to events. Rules of behaviour are not necessarily the same for different situations and across culture. Although there are some conceptual differences, Wrightman’s (1992) <i>complexity versus simplicity</i> measure of assumptions can be described as being the closest construct to social complexity.</p>
<p><i>Reward for Application</i></p> <p>“Hard working people will achieve more in the end.”</p>	<p>Nine items that reflect an optimistic view on the effect of human endeavour and the application of individual resources, define this social axiom dimension. Reward for application represents a general belief that effort, knowledge, careful planning and the investment of other resources (Foa, 1971) will lead to positive results and help avoid negative outcomes. It includes the picture of a just world where effort leads to pay-off. Individuals endorsing reward for application are less likely to seek and rely on the help from others in order to achieve what they want. Leung and Bond (2004) report parallels between the items defining reward for application and those measuring coping styles (Lazarus & Folkman, 1984), Furnham, Bond, Heaven, Hilton, Lobel et al.’s (1993) protestant work ethic, just world beliefs (Lerner, 1980), and Rotter’s (1966) measure of internal-external locus of control.</p>
<p><i>Religiosity</i></p> <p>“There is a supreme being controlling the universe.”</p>	<p>One of the seven items that define religiosity asserts the existence of supernatural forces as a central part of religion. The other six items focus on the beneficial functions of religious belief. Religious beliefs can be found in all cultural groups (Leung & Bond, 2004). Psychologists have argued followers of a religion find meaning and sense of shared purpose in it (Solomon, Greenberg, & Pyszczynski, 1991) and sociologists attribute a social thrust to religious beliefs (Berger, 1967). Religiosity promotes benevolence in human interactions, which means that for instance agreeableness and endorsement of humane leadership scores are higher for people that score high on this factor (Fu, Kennedy, Tata, Yukl, Bond, et al., 2004).</p>
<p><i>Fate Control</i></p> <p>“Fate determines one’s successes and failures.”</p>	<p>It represents a belief that life events are pre-determined and that there are some ways for people to influence these outcomes. It is interesting to note that lay people accept the logical contradiction between pre-determination and their ability to alter pre-determined events. In fact, practices for avoiding bad luck are commonplace in many cultures, and the contradiction involved in the simultaneous belief in pre-determination and possibilities for altering one’s fate may be widespread in everyday life. Two of the six items defining fate control contain the word ‘fate’ which, in these contexts, refers to an all-embracing force that determines the outcomes of human lives. The other items refer to the extent of people’s belief in fate and the actions they can undertake to influence the predicted outcomes. Although seemingly related to locus of control, fate control represents a broader construct by adding the theme that events are not only pre-determined but also predictable and can therefore be described as a combination of locus of control, predictability and fatedness.</p>

Adopted from Leung & Bond (2004) and Leung, et al. (2002).

For the sake of completeness, it should be mentioned that a sixth dimension (not included in the original version of Leung et al.'s 2002 scale) of the social axioms scale, labelled *harmony*, has been included in some recent studies (e.g. Safdar et al., 2003; Safdar, Lewis, & Daneshpour, 2006). Harmony is concerned with the belief about what causes harmony and conflicts among humans. It taps into the antecedents and consequences of positive relationships, for instance within one's family, friendships and work (Safdar et al., 2006).

These universal factors reflect basic human issues. The general level of the social axioms that form each of the factors makes them "powerful predictors of the manner in which an individual processes daily events and deals with his or her material, interpersonal, social and spiritual worlds" (Leung & Bond, 2004, p.181-182). Similar to Schwartz's (1992) logic for a universal structure of values, Leung and Bond (2004) propose that social axioms can be identified within different cultural groups and backgrounds. However, the endorsement level of the axioms across different cultures will vary as demographics differ. Additionally, not all social axioms perform equally well in specific environments. Particularly the social axiom *fate control* produced lower reliabilities in a number of studies (e.g. Klinger, Chaudhary, & Sriram, 2004; Leung; Au, Xu, Kurman, Niit, T., Niit, K., 2007; Leung et al., 2002) and therefore needs to be investigated in more detail (cf. Leung & Bond, 2004).

2.3.3.4 Theoretical Significance of the Social Axiom Approach

As previously mentioned, the concept of using beliefs in cross-cultural research is not new. Therefore, it is important to understand the theoretical significance and the value that social axioms add to existing theoretical frameworks. Since social axioms represent links among constructs that are oriented toward how to achieve certain endpoints (in contrast to values that only describe the endorsed endpoints), they can be used to predict behaviour in specific situations through their guiding function (Kurman & Ronen-Eilon, 2004). Because of

its prevalence in past research, it is necessary to outline the theoretical significance and show in what way social axioms can contribute to develop new and extend existing models. According to Leung and Bond (2004), the reasons for the importance of the axiom framework are threefold: firstly, up to now, values have been the dominant construct in cross-cultural psychology as well as cross-cultural business research (e.g. Hofstede, 1980a; Schwartz, 1994a; Smith et al., 1996). With social axioms, there is an additional and alternative way to interpret and understand cultural idiosyncrasies that might be difficult to elucidate by the value approach. The reason being the perspective social axioms offer, compared to values, in terms of how they theorize cultural influences. Unlike values, which relate to what people find important and desirable, social axioms are concerned with how one should act to achieve the desired outcome. Bond et al. (2004) describe attempts that use values to predict behaviour as often being unsatisfactory. Leung et al. (1995) found values and specific behaviours only show moderate links and sometimes the links are even weak (Feather & O'Brien, 1987; Henry, 1976). The same is true for personality and attitude research, where personality traits or general attitudes are also only weak in the prediction of specific behaviour (Fishbein & Ajzen, 1975; Mischel, 1968). Therefore, adding social axioms to trans-situational values will most likely enhance their predictive power regarding behaviour (Leung et al., 2007). Social axioms are important, scientifically useful culture descriptors. They are able to capture unique elements of cultures (Kurman & Ronen-Eilon, 2004). They can improve the existing scientific reach, since their correlations with value constructs is generally low (Bond et al., 2004). Social axioms not only yield information that cannot be detected by values but also can be used to confirm and backup findings from previous work that relied on the value approach.

The second reason in favour of the use of social axioms is that they play an important role in shaping human behaviours. Leung and Bond (2004) found correlations between social axiom dimensions and satisfaction measures, concern for politics, the emphasis on internal characteristics in mate preference, agreeableness, suicide, and many more.

Finally, the social axiom scale presents a *pure measure* of beliefs, which most previous constructs of belief scales failed to do. Leung et al. (2002) refer to the belief scales included in Robinson et al. (1991) as well as in Rotter (1966) when they state that almost all belief scales consist of social axioms, attitudes, values and normative beliefs²⁶. Therefore, the SAS is unique, since it was the first systematically developed scale based entirely on belief statements. So far, little is known about the empirical effects of this conflation. Normative and evaluative processes can be explained by very different theories and exploring alternative ways to measure beliefs in a more cognitive way could uncover interesting new knowledge (Leung & Bond, 2004).

Social axioms are well suited for describing cultures because they supply behavioural guidance for members of society (Kurman & Ronen-Eilon, 2004). This in return makes the knowledge of their characteristics important for day-to-day functioning within the society. Adding general beliefs to cross-cultural research methodologies will increase the reliability of findings with respect to behaviours that, until now, were only based on values (Bond et al., 2004).

Social axiom research. Most personality and social psychology research operates on an individual level, using participants from a single cultural group rather than nations or average citizens. Such within-culture studies offer a familiar format that enables psychologists to develop theories about individuals (Leung & Bond, 2004). In order to generalize such findings and develop a universal theory, the research is occasionally extended to social units or whole cultural groups (Smith & Bond, 1998). Leung and Bond (2004) report two different strategies for the evaluation of the social axiom structure. The first approach adopted by the authors was to collect data from a number of cultural groups (students) and calculate the average scores for the social axioms in order to draw a picture of the citizen axiom profile.

²⁶ One exception is the aforementioned SVS, which does not include social axioms.

These citizen scores were related to a variety of country-level indexes using culture as unit of analysis. In this approach each of the five dimensions of social axioms were targeted separately. In this study, individual-level and cultural-level analyses are mixed, although they usually do not relate to each other (Leung, 1989). Leung and Bond (2004) however argue that the procedure is legitimate since “[a]lthough the citizen scores are based on an individual-level factor structure, they represent meaningful constructs at the culture level” (Leung & Bond, 2004, p.158). The use of students to represent their country’s population has been justified as a good enough approximation since the degree of difference from one another has proven to be supportive of this argument. This is an important fact since it could also be true for other subgroups within a culture. The second strategy Leung and Bond (2004) report to investigate the social axiom dimensions is to study their antecedents and consequences at the individual level. In order to do so, social axioms and their specific nomological networks are linked to other constructs that show individual differences such as values. The goal is to uncover pattern of linkages and their variation across cultures.

The following table gives an overview of studies that have been conducted at the individual level, including participants from several cultural groups. Findings that have been found important for this research are based on the description of the five axiom dimensions and are generally coherent across studies.

Table 8

Individual Level Social Axiom Research

Author(s)	Review
Leung et al. (2002)	Original SAS and verification with university student data from the United States, Germany and Japan.
Singelis et al. (2003)	In this study, data from U.S. college students were used to examine relationships between individual difference variables (locus of control, social desirability, interpersonal trust, cognitive flexibility, and paranormal beliefs) and social axioms. Both positive and negative correlations have been exposed between the different variables and the social axioms.
Van Bavel, Noels, & Williams (2002)	The authors used the five individual-level dimensions of social axioms to correlate with self-reported behaviours of undergraduates in Canada. The items used in the study that correlate with the social axiom dimensions include: number of organizations volunteered for, checking the horoscope, attending religious services, and engaging in prayer or meditation.

Rupf & Boehnke (2002)	This German based study discovered relationships between social axioms and the hierarchical and self-serving nature of interpersonal relations, and right-wing behaviour, in short: hierarchic self-interest.
Ward & Ramakrishnan (2003, Study 1)	<i>Kiasu</i> , the fear of losing out, was brought into relation with social axioms in this study. Data from university students in Singapore were used to find relationships between social axioms and selfishness, rudeness, greed, calculation, and competitiveness.
Safdar, Lewis, Greenglass, & Daneshpour (2003)	U.S. university students from three different religious groups (Moslem, Jewish, and Christian) were the basis for this study, examining relationships between social axioms and coping strategies regarding the September 11 terrorist attacks against the USA. Proactive coping (e.g. goal setting with self-regulatory goal attainment) as well as avoidance coping (delaying and lack of effort in problem-solving) both showed correlations with social axioms.
Kurman & Ronen-Eilon (2004)	Using both the SAS and the SVS, this study examines the functional value of social axioms. Data from Israelis, immigrant groups in Israel, as well as their estimations of the axiom scores of average Israelis, were used to get results about social and functional adaptation. When contrasting the effects of knowledge about values and axioms, axioms were generally more predictive of adaptation than values. The study provided strong support for the functionalist view of social axioms.
Bond et al. (2004)	The authors of this study hypothesized that social axioms together with measures of motivation can be used to predict an individual's actions. Therefore they examine and subsequently outline the usefulness of social axioms together with four of the Schwartz's (1992) value dimension to predict behavioural tendencies.
Bond et al. (2004)	In this research survey across 41 nations, Bond et al. (2004) correlated culture-level dimensions of social axioms with country-level indices. (Individual data treated at the culture level in analysis.) The used indices can be sorted into three different categories: (1) cultural dimensions derived from grouping averages of individual responses to value-type or behaviour-orientated measures. This includes the important work of Hofstede (1991), Schwartz (1994a), Smith et al. (1996), Inglehart (1997), and House et al. (2003). (2) Indices based on an aggregation of ungrouped individual responses and (3) true country-level indices not derived from aggregating individual responses.
Fu et al. (2004)	The structure of social axioms has been applied to investigate persuasive, assertive and relationship based influence strategies. In addition to social axioms, the 12-nation study was also used to investigate the effects of GLOBE's cultural values on these strategies.
Leung (2004b)	Using the data from two surveys in Hong Kong, Leung reports on the correlations between the social axiom dimension, social cynicism and job attitudes. He found significant negative correlations between social cynicism and (1) job satisfaction, (2) job commitment, (3) perceived organizational justice, (4) organizational commitment, (5) evaluation of superiors, and (6) life satisfaction.
Leung & Bond (2004)	The authors correlate social axioms on the individual level with socio-economic-political indicators and psychological indices (derived from aggregating psychological data across individuals). Student data from 40 cultural groups were analysed and "citizen" axiom profiles identified that could be correlated with the country level indices. Each dimension of social axioms has been targeted independently.

Partly adopted from Leung & Bond (2004).

Social axioms – correlations with other variables. After presenting the citizen scores of the five social axiom dimensions for some 40 countries, Leung and Bond (2004) grouped a variety of country-level indexes into two categories, namely socio-economic-political and

psychological indexes, and report significant correlations between the individual-level axiom dimensions and these indexes. Examples for meaningful correlates of social axioms with socio-economic-political indicators are the country's GDP, percent of GDP on education and working hours per week. In the category of psychological indicators at the societal level is a selection of work-related variables, such as job satisfaction (International Survey Research, 1995, as cited in van de Vliert & Janssen, 2002), satisfaction toward company (International Survey Research, 1995, as cited in van de Vliert & Janssen, 2002), work ethic – enjoyment of working hard (Lynn, 1991), sources of guidance – vertical (superiors) (Smith et al., 2002), view on leadership (humane/team-oriented) (Den Hartog, House, Hanges, & Ruiz-Quintanilla, 1999) and in-group disagreement (Smith et al., 1998)²⁷. Some of the variables are useful for the development of the hypotheses guiding the present study, since they give further insight to interpret the social axiom dimensions. The correlations between these and the five social axiom dimensions will be discussed in detail in section 3.

2.3.3.5 Two Country-Level Dimensions of Social Axioms

In a study based on results from 41 cultural groups, Bond et al. (2004) used a culture-level factor analysis of cultural means to uncover two country-level dimensions of social axioms, namely *dynamic externality* and *societal cynicism*.

Dynamic externality represents a combination of the items of the individual level dimensions, *reward for application*, *religiosity*, *fate control*, and *social complexity* (Leung et al., 2002). The dynamic part of this construct arises from its emphasis on effort and control. The label *externality* can be ascribed to the elements of *religiosity* and *fate*. *Dynamic externality* “denotes the culture-level belief structures of how people have mobilized themselves psychologically to confront environmental difficulties and expected to succeed” (Cheung, Leung, & Au, 2006, p.528). The seemingly new cultural dimension – *societal*

²⁷ The complete list of correlations can be found in Leung and Bond (2004), Table 6 and 7.

cynicism – consists of items from only one individual level dimension – *social cynicism* – and is, in a conceptual sense, comparable to it (Bond et al., 2004). This dimension represents people's mistrust in social institutions and the generally negative view of human nature such as "the belief that powerful people and institutions have suppressed the citizenry for selfish and malignant purposes" (Cheung et al., 2006, p.528).

The meaning of the country-level dimensions. One way to map the meaning of the culture-level social axiom dimensions is to correlate them with a variety of country-level indexes. This approach can be found in Hofstede's (1980a, 1991) classical work where he mapped meaningful relationships between his value-based cultural dimensions and a variety of national characteristics. Bond et al. (2004, p.555) used the same methodology to uncover correlations between the culture-level dimensions of social axioms and three types of country-level indices: "cultural dimensions derived from grouping averages of individual responses to value-type or behavior-oriented measures, including those of Hofstede (1991), Schwartz (1994a), Smith et al. (1996), House et al. (2003), and Inglehart (1997); (b) indices based on an aggregation of ungrouped individual responses, such as citizen scores on life satisfaction, trust, and so forth; and (c) true country-level indices not derived from aggregating individual responses, such as level of democracy, rate of unemployment, and so forth". In more detail, dynamic externality has shown correlations with the following cultural concepts: Inglehart and Baker's (2000) dimensions traditional orientation and survival values, as well as power distance and individualism (Hofstede, 1980a) and four of Schwartz's (1994a) dimensions, namely conservatism, intellectual autonomy, egalitarian commitment as well as harmony. Additionally, Bond et al. (2004) report correlations of dynamic externality with Smith et al.'s (1996) loyal involvement and five dimensions of House et al. (2003), namely humane orientation, in-group collectivism, uncertainty avoidance, future orientation, and gender egalitarianism. Social cynicism on the other hand only correlates with one dimension of Inglehart and Baker's (2000), survival, two of Hofstede's (1980a) dimensions, individualism

and long-term orientation and House et al.'s (2003) uncertainty avoidance, performance orientation as well as egalitarianism.

Leung et al. (2005) suggest significant implications from both dimensions for international business research. Not only do they correlate with a wide range of country-level indexes but they also relate to the reliance on superiors as a source of guidance (*dynamic externality*) and job dissatisfaction (*societal cynicism*).²⁸

2.3.3.6 Linking Social Axioms and Values

In order to be able to predict and better understand general patterns of social behaviours, it is important to identify and understand how values are related to social axioms (Leung & Bond, 2004).

Differing from social axioms, values have the form: "A is good/desirable/important. A is a value, and its importance is determined by the importance or desirability that people attach to it" (Leung & Bond, 2004, p.129). Due to the similar structure of values and beliefs and the fact that most beliefs are evaluative, values are sometimes regarded as evaluative beliefs. According to Leung and Bond (2004), the difference between them lies in the specific nature of the evaluative component of a belief, as opposed to being general for values. In the words of Leung and Bond (2004, p.130): "if the desirability pole of an evaluative belief becomes specific, it turns into a social axiom".

Since general beliefs, or more specifically social axioms and motivations, are seen as conceptually separate predictors of human behaviour, it has been implied that both constructs do not overlap. This assumption has proven to be true. Leung and Bond (2004) reported a number of studies that showed only a moderate correlation between values and social axioms, advocating that both constructs complement each other as hypothesized by Feather's (1982)

²⁸ For country-level scores, correlations between the two social axiom dimensions and country-level indexes, as well as the other cultural dimensions, see Bond et al. (2004).

expectancy-value theory. Keung and Bond (2002) studied the degree of overlap between the five social axiom dimensions and two of Schwartz's (1992) value dimensions, and found that their degree of overlap was small. Studying the adaptation of immigrants in Israel, Kurman and Ronen-Eilon (2004) found that social axioms were more predictive than values. Therefore, the social axioms construct has been proposed to complement the value framework (Singelis et al., 2003).

Bond et al. (2004) justify the combination of values and social axioms in future studies (despite their being relatively independent) with correlations occurring between the two. As an example, they refer to results of their own research that show a relationship between *social cynicism* and the value of *self-enhancement*. To maximize the predictive efficiency of future research using both social axioms and values, possible overlap between them must be avoided when selecting the items. "Both constructs are worthy of study and can reveal significant results when combined that would not be the case if either were used alone" (Bond et al., 2004, p.189). Following Smith and Bond (2003), it is likely that complementing both psychological constructs will help to discover cultural differences in behaviour. In other words, differences in behaviour of different cultures could arise because of both the valuation of outcomes and because of "how cultural members differently construe their world" (Bond et al., 2004, p.189).

The assumption of social axioms and values representing two distinct constructs and that their overlap is small has been confirmed in a recent study by Leung et al. (2007). The authors examined the relationships of the five social axiom dimensions and Schwartz's (1992) values using data from five cultural groups, uncovering only low correlations between the two constructs. Social axiom dimensions and value types however are related in a meaningful and interpretable way that is "generally similar across the five cultural groups" (Leung et al., 2007, p.91). More specifically the authors found relationships between *social cynicism* and

power, conformity, and self-direction. Reward for application was found to be related to *hedonism, tradition, conformity, power, and achievement. Social complexity/flexibility* showed relationships with *self-direction, benevolence*, as well as with *tradition* and *fate control* correlated with *tradition* and *self-direction*. Lastly, meaningful relationships were found between the social axiom *religiosity* and eight of the value types namely *tradition, conformity, benevolence, hedonism, stimulation, self-direction, power, and achievement*. These findings helped to strengthen the validity and universality of the social axiom construct.

2.4 Organizational Context

Globalisation coupled with growing competition drives companies to develop a set of skills and resources that will enable them to survive the challenging business environment. Ways towards this are a higher cost-efficiency or by differentiating one's products from those offered by competitors²⁹. In the present business environment, it is also important to build competencies that are not easily adoptable and assailable by the competition. In order to be successful, companies need to satisfy their customers better than their competitors do by offering the right products and services. This, in return, requires a culture within the organization that encourages the development and embedment of such competencies (Jain & Bhatia, 2007). One such culture widely supported in the marketing literature is *market orientation* (Narver & Slater, 1990; Woodruff, 1997). Being able to commit to organization-wide market orientation supports the enhancement of operational efficiencies and hence helps to adapt quickly to a changing business environment (Wood, Bhuian, & Kiecker, 2000).

To sustain success, the identification and satisfaction of customer needs plays an important role in modern marketing (Kotler, 2002). Since the beginning of the 1950s, academics as well as managers have become aware of the benefits of a market-orientated strategy and extensive research in this field has been conducted. Day (1990) and Porter (1980) describe a market-orientated strategy as an asset that gives the company a competitive advantage that is difficult to imitate. Kohli and Jaworski (1990) call the concept of market orientation a cornerstone of marketing and strategic management. Market oriented organizations hold a superior ability to understand markets, as well as attract and keep customers (Day, 1999). Narver and Slater (1990) showed that there is a direct relationship between a company's level of market orientation and its profitability / performance. This has recently been confirmed by Cano et al. (2004), Deshpandé and Farley (2004) and Kirca et al.

²⁹ Aaker, 1988; Bharadwaj, Varadarajan, & Fahy, 1993; Day & Wensley, 1988; Hall, 1980; Hitt & Ireland, 1986; Porter, 1980; Slywotsky & Shapiro, 1993; Treacy & Wiersema, 1993

(2005). Therefore, market orientation can be described as a way of improving a company's performance. In line with this, researchers have investigated the link between market orientation and performance extensively, focusing on the direct causal link (e.g. Narver & Slater, 1990; Ruekert, 1992), moderators of the relationship (Day & Wensley, 1988; Hart & Diamantopoulos, 1993; Greenley, 1995a; Jaworski & Kohli, 1993; Slater & Narver, 1994a), as well as the influence of the antecedents of a market orientation (Jaworski & Kohli, 1993). In addition to a market orientation's positive effect on an organizations performance, it also influences other aspects of effectiveness, such as providing benefits to the organization, its employees and customers, as well as society in general. For an overview see Cano et al.'s (2004) meta-analysis.

2.4.1 Market Orientation – Streams of Research

The concept of market orientation can clearly be described as a cornerstone of both marketing and strategic management (Greenley, 1995a) and has been defined and empirically validated as a way of improving an organization's performance (Verayangkura & Johnson, 2003). Being market driven or market oriented applies for organizations that focus on an external orientation toward their markets (Verayangkura & Johnson, 2003). Rivera (1995) broadly describes market orientation as a strategy used in order to reach a sustainable competitive advantage. Detailed conceptualizations of the construct found in literature are remarkably inconsistent and a number of distinct definitions exist (Hunt & Morgan, 1995).

In the following section, the existing literature will be reviewed with special focus on the main streams of research, as well as their similarities and distinctions. Two fundamentally similar perspectives on the market orientation construct are prevalent in today's literature (Cadogan & Diamantopoulos, 1995; Griffiths & Grover, 1998a; Homburg & Pflesser, 2000):

the *philosophical-cultural perspective*³⁰ and the *behavioural perspective*³¹. The focus of the philosophical-cultural perspective lies on more fundamental facets of an organizational culture, such as customer orientation, competitor orientation and inter-functional coordination that support a market-oriented behaviour. Narver and Slater (1990a, p.21) for instance describe market orientation as “the organizational culture [...] that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business”. The behavioural point of view on the other hand, focuses on activities of an organization that relate to market intelligence such as acquiring, disseminating, and responding to it (Kohli & Jaworski, 1990).

Burgess (2006) sub-classifies the contemporary definition of the market orientation construct into four main approaches that do not present mutually exclusive constructs but rather focus on the same reality (Ruekert, 1992). Kohli and Jaworski's (1990, p.6) strategic-behavioural approach defines market orientation in terms of a combination of three sets of activities: “Market orientation is the organizationwide *generation* of market intelligence pertaining to current and future customer needs, *dissemination* of the intelligence across departments, and organizationwide *responsiveness* to it”. Furthermore, *responsiveness* is defined as “being composed of two sets of activities – response design (i.e., using market intelligence to develop plans) and response implementation (i.e., executing such plans)” (Jaworski & Kohli, 1993, p.54). Narver and Slater's (1990) approach defines market orientation as an *organizational culture*. The construct consists of three components, which are behavioural in nature: (1) customer orientation, (2) competitor orientation, and (3) inter-functional coordination. Their definitions read as follows: customer orientation stands for “the sufficient understanding of one's target buyers to be able to create superior value for them continuously” (Narver & Slater, 1990, p.21). Competitor orientation means that a “seller

³⁰ Narver and Slater (1990) are the leading theorists of this approach.

³¹ This approach has mainly been linked to Kohli and Jaworski's (1990) work.

understands the short-term strengths and weaknesses and long-term capabilities and strategies of both the key current and the key potential competitors” (Narver & Slater, 1990, p.21-22), and the third component, inter-functional coordination, is defined as “the coordinated utilisation of company resources in creating superior value for target customers” (Narver & Slater, 1990, p.22). Additionally, the authors propose two decision criteria, long-term focus and profitability. Pursuing this culture will lead to superior value for customers and in return create superior business performance. In their philosophical-cultural approach, Deshpandé, Farley and Webster’s (1993, p.27) define market orientation from a philosophical point of view of an organization’s culture as “the set of beliefs that puts the customer’s interest first, while not excluding those of other stakeholders such as owners, managers, and employees, in order to develop a long term profitable enterprise”. In his strategic approach that borrows aspects from both Narver and Slater’s (1990) and Kohli and Jaworski’s (1990) definitions, Ruekert (1992, p.228) defines the level of market orientation in a business as “[t]he degree to which the business unit: (1) obtains and use information from customers; (2) develops a strategy which will meet customer needs; and (3) implements that strategy by being responsive to customer needs and wants”. He proposes market orientation to be an inter-functional, organization-wide strategy, whose purpose is to create superior financial results.

Another contemporary conceptualization of market orientation has been offered by Lafferty and Hult (2001). The authors summarize the conceptualizations of the market orientation construct differentiating between five major attempts: (1) the decision-making perspective (Shapiro, 1988), (2) the market intelligence perspective (Kohli & Jaworski, 1990), (3) the culturally based behavioural perspective (Narver & Slater, 1990), (4) the strategic perspective (Ruekert, 1992), and (5) the customer perspective (Deshpandé et al., 1993). *Table 9* summarizes the representative works in each area.

Table 9

Streams of Research on Market Orientation

Perspective	Representative publications
Decision-making process	Glazer (1991); Glazer & Weiss (1993); Shapiro (1988)
Market intelligence	Avlonitis & Gounaris (1997); Cadogan & Diamantopoulos (1995); Cadogan, Diamantopoulos, & Siguaw (1998); Hart & Diamantopolous (1993); Hooley, Lynch, & Shepherd (1990); Jaworski & Kohli (1993, 1996); Kohli & Jaworski (1990); Kohli, Jaworski, & Kumar (1993); Maltz & Kohli (1996); Selnes, Jaworski, & Kohli (1996)
Culturally based behaviours	Cadogan & Diamantopoulos (1995); Han et al. (1998); Narver & Slater (1990, 1998); Narver, Slater, & Tietje (1998); Schlegelmilch & Ram (2000); Siguaw & Diamantopoulos (1995); Siguaw, Brown, & Widing (1994); Slater & Narver (1992, 1994a)
Strategic marketing focus	Day (1994a); Day & Nedungadi (1994); Gatignon & Xuereb (1997); Morgan & Strong (1998); Moorman (1998); Ruekert (1992); Webster (1992)
Customer orientation	Deshpandé & Farley (1998a, 1998b); Deshpandé et al. (1993); Siguaw et al. (1994)

Adapted from Lafferty & Hult (2001, p.95 Table I).

After reviewing the relevant literature, Lafferty and Hult (2001) synthesise a market orientation framework that integrates their five perspectives of a market orientation. The authors focus on several similarities they found to be the basis of a market orientation. The four general areas of agreement in the five perspectives include (1) an emphasis on customers, (2) the importance of shared knowledge (information), (3) interfunctional coordination of marketing activities and relationships, as well as (4) being responsive to market activities by taking the appropriate action.

While research and generation of knowledge about market orientation during the last two decades has focused on its antecedents and consequences as well as on measurement issues (Deshpandé & Farley, 1998a; Kohli et al., 1993; Narver & Slater, 1990) the essence of the construct itself is still an issue under debate. However, it can be said that the construct of market orientation has most influentially been conceptualized by Kohli and Jaworski (1990) – later further refined by Kohli et al. (1993) and Jaworski and Kohli (1993, 1996) – as well as Narver and Slater's (1990) uni-dimensional construct – later refined by Slater and Narver (1994a, 1995, 1996) (Greenley, 1995a).

In today's turbulent competitive business environment, many scholars as well as practitioners see the concept of market orientation as a potential solution for organizations to survive competition (cf. Eppes, 1997; Foreman, 1997; Harris & Piercy, 1997; Hurley & Hult, 1998³²). Indeed, substantial evidence can be found in literature that the incorporation of a market orientation leads to superior performance³³. Harris (2000) summarizes the research into the study of market orientation as having four main themes: (1) the marketing concept itself³⁴, (2) the definition and operationalization of market orientation³⁵, (3) the market orientation-performance link (Pitt, Caruana, & Berthon, 1996; Selnes et al., 1996) and focus on environmental conditions (see Greenley, 1995a; Slater & Narver, 1994a), as well as (4) potential barriers to developing a market orientation³⁶.

Since the early 1990s, greater attention has been given to the implementation of the marketing concept, which in turn became synonymous with a market orientation (Deshpandé et al., 1993; Kohli & Jaworski, 1990; Narver & Slater, 1999). For a comprehensive review of definitions of the market orientation concept, see Harris (1998b). The authors' synthesized definition of a market oriented culture reads: "the dominant, dynamic segment of an organization whose orientation, attitudes and actions are geared towards the market" (Harris, 1998b, p.360). Most of the seminal work on market orientation originate from the USA; however these results led to replications of the studies all over the world³⁷.

2.4.1.1 Historic Review of the Marketing Concept

When Kohli and Jaworski (1990) performed a literature research, they discovered that only few publications dealt with *the marketing concept*. The limited research that was

³² for an overview see Deshpandé, 1999 and Wilkinson, 2001

³³ for recent meta-analyses on the market orientation-performance relationship see Cano et al. (2004) as well as Kirca et al. (2005)

³⁴ see e.g., Hirschman, 1983; Kotler & Levy, 1969; McNamara, 1972; Webster, 1994

³⁵ for instance, Cadogan & Diamantopolous, 1995; Deng & Dart, 1994; Kohli & Jaworski, 1990; Narver & Slater, 1990

³⁶ see Felton, 1959; Harris, 1996; Harris, 1998a; Jaworski & Kohli, 1993; Lear, 1963; Messikomer, 1987

³⁷ e.g. Canada: Deng, & Dart, 1994; New Zealand: Gray et al., 1998; UK: Greenley, 1995a; Hungary, Poland and Slovenia: Hooley, Cox, Fahy, Shipley, Beracs, Fonfara, & Snoj, 2000; UK and Malta: Pitt et al., 1996; Hungary and Poland: Shipley et al., 1995

available could be categorised into (1) descriptive work on the level of adoption of the marketing concept (Barksdale & Darden, 1971; Hise, 1965; Lusch, Udell, & Lacznia, 1976; McNamara, 1972), (2) publications on the business philosophy (Business Week, 1950; McKitterick, 1957; Viebranz, 1967), (3) the limitations of the marketing concept (Houston, 1986; Levitt, 1969; Tauber, 1974), and (4) the facilitation and difficulties of the concept's implementation (Felton, 1959; Lear, 1963; Webster, 1988).

Definitions of the marketing concept were diverse. Felton (1959, p.55) for instance defined marketing as “a corporate state of mind that insists on the integration and coordination of all the marketing functions which, in turn, are melded with all other corporate function, for the basic purpose of producing maximum long-range corporate profits”. A broader definition was offered by McNamara (1972, p.51), who defined the concept of marketing as “a philosophy of business management, based upon a company-wide acceptance of the need for customer orientation, profit orientation, and recognition of the important role of marketing in communicating the needs of the market to all major corporate departments”. Both definitions have three underlying core themes: (1) customer focus, (2) coordinated marketing, and (3) profitability (Kotler, 1988). Other authors such as Lavidge (1966), Levitt (1969), Konopa & Calabro (1971), Bell & Emory (1971), and Stampfl (1978) share this view and publish conceptually similar definitions.

Differentiations between the use of the terms marketing orientation and market orientation can also be found in the literature. McCarthy and Perreault (1990) were the first to adopt the term market orientation to refer to the implementation of the marketing concept (Lafferty & Hult, 2001). Traditionally, marketing orientation emphasised customer orientation, and focused on consumer needs, as well as the satisfaction of the customer (Kotler & Armstrong, 1994). Kohli and Jaworski (1990) on the other hand prefer the term *market orientation*, which stands for the implementation of the marketing concept, since it is

less tied to the marketing department of an organization but concerns all departments. Some researchers see a market orientation predominantly as a customer orientation³⁸; others expand the meaning to both customer and competitor orientation³⁹.

In his historic review on the construct of market orientation, Dalgic (1998) draws a parallel between the development of a market orientation and the economic development of a country and lists the ‘eras’ of orientations as *production*, *sales*, and *market orientation*. Dalgic lists several marketing scholars who support this view, amongst others Berkowitz, Kerin and Rudelius (1989), Kotler (1990), McCarthy and Parrault (1990), as well as Pride and Ferrell (1998). Seglin (1990) argues in this regard that the development of a market orientation is linked to the ‘maturity’ of the industrialization process, i.e. only once production and sales needs are satisfied will a society engage in market oriented behaviours⁴⁰. Lusch and Laczniak (1987) found that this relationship is moderated by, for instance, competitive intensity. Although most of these early attempts to explain the nature of market orientation are not empirically proven, Dalgic (1998, p.49) reports “a general agreement among the majority of marketing authors that market orientation reflects an advanced stage of economic development” which rises parallel with increasing competition.

In his evaluation, Dalgic (1998) continues with the point of view of micro-environmental, organizational factors. In this regard, both organizational and managerial characteristics of market-orientated organizations have been subjects under study. In addition, the construct of market orientation itself, as well as its antecedents, are of interest in terms of managerial implementation issues. The work that falls into this category, including research by Deshpandé et al. (1993), Kohli and Jaworski (1990), Narver and Slater (1990), and Ruekert (1992), to name just the early attempts in this direction, will be discussed in detail later in this chapter.

³⁸ e.g. Deshpandé et al., 1993; Ruekert, 1992; Shapiro, 1988

³⁹ e.g. Kohli & Jaworski, 1990; Kotler & Armstrong, 1994; Narver & Slater, 1990

⁴⁰ also see Skinner (1990); Sharp (1991)

2.4.1.2 Shapiro (1988)

The decision-making perspective of market orientation originates from Shapiro (1988). The author describes the decision-making process as a management based commitment to sharing information within the organization and practicing open decision-making between functional and divisional personnel. The three characteristics that specify a market driven organization are: (1) information on all-important buying influences permeates every corporate function, (2) strategic and tactical decisions are made interfunctionally and interdivisionally, and (3) divisions and functions make well-coordinated decisions and execute them with a sense of commitment (Shapiro, 1988).

2.4.1.3 Kohli & Jaworski (1990)

Kohli and Jaworski (1990) as well as Jaworski and Kohli (1993) consider those organizations as being market oriented whose “actions are consistent with the marketing concept” (Kohli & Jaworski, 1990, p.1). The authors found that only little research on the implementation of the marketing concept was available and only a few articles conceptually examined the topic⁴¹. In order to develop a market orientation theory, Kohli and Jaworski (1990) drew on literature from marketing and related disciplines and conducted field interviews with managers from various organizations. Kohli and Jaworski’s (1990) formal definition of market orientation is based on organizational behaviours. Market orientation consists of three activities within the organization: (1) *market intelligence generation*, (2) the *dissemination* of this intelligence across departments in the firm, and (3) *responsiveness* to intelligence. In the following, the three activities will briefly be described:

(1) The generation of market intelligence is a process that should be accomplished by multiple departments within the organization, since each of them has a distinct view on the market. It includes collecting and assessing the needs and preferences of customers, as well as

⁴¹ e.g. Deshpandé & Webster, 1989; Felton, 1959; Houston, 1986; Shapiro, 1988; Stampfl, 1978; Webster, 1988

what causes them to change over time and how they change (Kohli et al., 1993). This also includes non-verbalized facts, such as unsatisfied current and future needs of customers, data about competitors, such as their strengths and weaknesses or current and past strategies, as well as their objectives and company culture (cf. Aaker, 1988; Jaworski & Kohli, 1993). This way the organization will develop an understanding of their target market including customers, competitors and external environmental variables.

(2) Dissemination of market intelligence: market intelligence is only useful if available within the organization. Therefore, it is important that the gathered information be communicated. This should happen both horizontally, i.e. within the departments, and vertically in the organization. Both formal and informal dissemination of intelligence can occur (Kohli et al., 1993). The two major dimensions of knowledge dissemination are the amount and type of communication⁴².

(3) Responding to market intelligence: After generating and disseminating market intelligence, the organization must respond to it. This can happen on the planning side, for example developing marketing programs, as well as controlling and coordinating the implementation of these programs (Kohli et al., 1993). Planning includes the selection of the target market, as well as creating the proper environment for the response design. Response implementation refers to the production, marketing and distributing the products, as well as to providing a good service to the customers⁴³.

The integrated definition by Kohli et al. (1993, p.468) describes market orientation as “the organizationwide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence within the organization, and responsiveness to it. Key features of this integrated view are (1) an expanded focus on market rather than customer

⁴² For more information on the appraisal of the dissemination system of an organization see Kohli & Jaworski (1990); Maltz & Kohli (1996); Menon & Varadarajan (1992); Ruekert & Walker (1987); Sinkula, Baker, & Noordewier (1997); Zeithaml, Berry, & Parasuraman (1988).

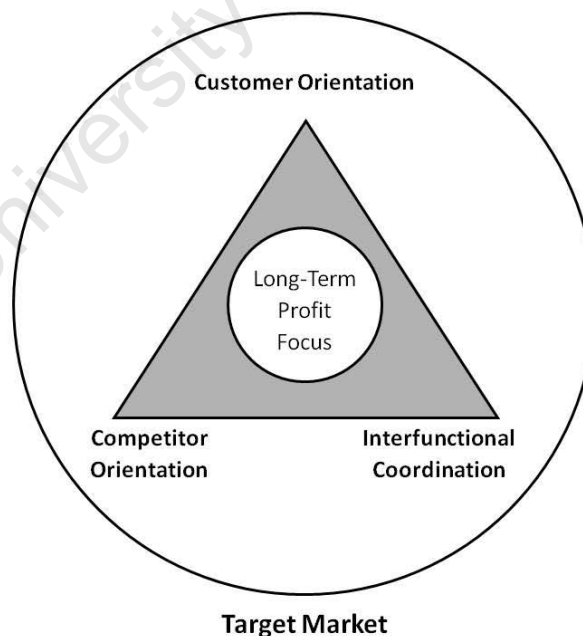
⁴³ e.g. Deshpandé et al., 1993; Deshpandé & Zaltman, 1982; Menon & Varadarajan, 1992; Sinkula et al., 1997

intelligence, (2) an emphasis on a specific form of interfunctional coordination with respect to market intelligence, and (3) a focus on activities related to intelligence processing rather than the effects of these activities (e.g., profitability)”.

2.4.1.4 Narver & Slater (1990)

Based on a literature review of the major concepts of both *sustainable competitive advantage* (SCA), and on market orientation⁴⁴, Narver and Slater explain market orientation as an organizational culture, which leads to market-orientated behaviour. The authors describe the three behavioural components as (1) customer orientation, (2) competitor orientation, and (3) interfunctional coordination and add two decision-criteria: long-term focus and profitability (Narver & Slater, 1990; Slater & Narver, 1995). The main subject of this cultural perspective is organizational norms and values that foster behaviours consistent with market orientation (Deshpandé et al., 1993; Narver & Slater, 1990).

Figure 3
Components of Market Orientation



Adapted from Narver & Slater (1990, p.23).

⁴⁴ e.g. Aaker, 1988; Anderson, 1982; Day, 1984; Kotler, 1977; 1984; Levitt, 1960, 1980; Ohmae, 1982; Peters & Waterman, 1982; Porter, 1980, 1985

Their description of the three components of market orientation is outlined in *Figure 3* and reads as follows:

“[c]ustomer orientation and competitor orientation include all the activities involved in acquiring information about the buyers and competitors in the target market and disseminating it through the business(es). The third hypothesized behavioural component, interfunctional coordination, is based on the customer and competitor information and comprises the business’s coordinated efforts [...] to create superior value for the buyers” (Narver & Slater, 1990, p.21).

(1) *Customer orientation* includes understanding the target buyers (e.g. the value chain) now and over time in order to create superior value for them. This is comprised by all necessary activities for the acquisition and dissemination of information about target buyers/customers. “A seller creates value for the buyer in only two ways: by increasing benefits to the buyer in relation to the buyer’s costs and by decreasing the buyer’s costs in relation to the buyer’s benefits” (Narver & Slater, 1990, p.21). In order to achieve this it is necessary to “understand the economic and political constraints at all levels in the channel” (Narver & Slater, 1990, p.21). Although considered equally important as competitor focus and inter-functional coordination, some authors regard a customer orientation as the most fundamental aspect of a corporate culture (e.g. Deshpandé et al., 1993; Lawton & Parasuraman, 1980). “[C]ustomer orientation advocates a continuous, proactive disposition toward meeting customers’ exigencies” (Han, Kim, & Srivastava, 1998, p.33). This in return fosters the continuous process of innovation (Peters, 1984) which has been proven to be true (Deshpandé et al., 1993).

(2) A *competitor orientation* includes the acquisition of information on both existing and potential competitors of the market-orientated organization. It is important to understand their strengths and weaknesses, in the short- and long-term. The bases for a successful competitor orientation are a set of questions: (a) Who are the competitors? (b) What technologies do they offer? And (c) Do they represent an attractive alternative from the

perspective of the target customers? (Slater & Narver, 1994b). In order to analyse the competitors, Narver and Slater propose the use of “the entire set of technologies capable of satisfying the current and expected needs of the seller’s target buyers” (Narver & Slater, 1990, p.22). Relying entirely on a customer orientation leaves the organization prone to a reactive posture regarding the coping with competitor strategies (Day & Wensley, 1988). Therefore, it requires more than just a customer-focus for an effective business strategy (Han et al., 1998).

(3) *Inter-functional coordination* corresponds to the last series of core market orientation components and describes the coordinated use of organization-wide resources in creating superior value for target customers. This component is tied closely to the other two components of market orientation. Isolation between the functional areas within the organization needs to be overcome with the help of management. Inter-functional dependency and the alignment of functional area incentives are necessary to achieve inter-functional coordination. The marketing department of an organization is not the only one responsible for implementing a market orientation. As proposed by Felton (1959) in order to implement the marketing concept successfully, it is necessary to integrate all business functions in the process. In order to extend the inter-functional coordination, Kim (1980) proposes to increase the frequency of committee meetings. Aiken, Bacharach and French (1982) attribute a high inter-functional coordination to the number of face-to-face contacts in both horizontal and vertical relationships within the organization, and inter-unit decision sharing was proposed to positively contribute to inter-functional coordination by Hull and Hage (1982).

2.4.1.5 Deshpandé, Farley & Webster (1993)

Deshpandé et al. (1993, p.27) describe customer orientation “as being a part of an overall, but much more fundamental, corporate culture”. Deshpandé and Farley (1998) conceptualize the construct of market orientation, which they concluded to be synonymous with a customer orientation, from a behavioural point of view “as a set of cross-functional

processes and activities directed at creating superior value for customers through continuous needs assessments” (Cano et al., 2004, p.182). Homburg and Pflesser (2000) note that, although based on a cultural definition of market orientation, Deshpandé et al.’s (1993) conceptualization is founded on behaviours. “Customer orientation is the set of beliefs that puts the customer’s interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise” (Deshpandé et al., 1993, p.27). The authors argue that competitor orientation as being part of a market orientation can almost be antithetical to a customer orientation and should therefore be excluded from the construct. Customer orientation is part of the overall corporate culture. It cannot be limited to information processing but calls for inter-functional mechanisms that transfer knowledge into specific actions.

2.4.1.6 Ruekert (1992)

Ruekert (1992, p.228) refers to the customer environment as “the critical external environment in developing a market orientation”. The collection and use of customer information as basis for a market orientation is consistent with earlier conceptualizations of the construct (e.g. Kohli & Jaworski, 1990; Narver & Slater, 1990; Shapiro, 1988). Ruekert’s second dimension, the development of a strategy that meets customer needs, stands for the plan itself, its objectives as well as allocated resources. Market orientation is directly related to the degree of the consideration and satisfaction of customer needs and wants. The third dimension of Ruekert’s definition refers to the implementation of the aforementioned strategy and is conceptually similar to Narver and Slater’s (1990) *interfunctional coordination* to deliver customer value, as well as to Kohli and Jaworski’s (1990) *responsiveness*. Although showing substantial similarities, Ruekert’s approach differs from Kohli and Jaworski (1990), Narver and Slater (1990) and Shapiro (1988) in that he emphasises “the development and execution of business unit strategy as the key organizing focus of market orientation” (Ruekert, 1992, p.229).

2.4.1.7 Multiple Stakeholder Orientation

A *stakeholder* can be defined as any individual (or group) who can affect, or is affected by, the achievement of an organization's purpose (Clarkson, 1995; Freeman, 1984; Rhenman, 1968). Freeman's (1984) stakeholder map lists and describes the diverse stakeholder groups of an organization as shareholders, employees, consumers, competitors, unions, and supplier. There are two groups of stakeholders: primary stakeholders who are essential for survival, and secondary stakeholders who are not necessarily essential for survival (Clarkson, 1995; Mitchell, Agle, & Wood, 1997; Polonsky, 1995). All of them have their distinct set of expectations towards the organization (King & Cleland, 1979).

It is advantageous to the organization to address this range of diverse interests in order to achieve its mission and a good performance (Clarkson, 1995; Freeman, 1984; Harrison & St John, 1994; Rhenman, 1968). However, it is not always possible to satisfy the interests of all groups, since resources are generally limited (Amit & Schoemaker, 1993; Barney, 1991; Grant, 1995; Mahoney & Pandian, 1992).

Often a market orientation approach focuses primarily on the needs of customers and competitors (Homburg & Pflesser, 2000; Jaworski & Kohli, 1993; Kohli et al., 1993; Narver & Slater, 1990) at the expense of other stakeholders. It is important to address the interests of all stakeholders when making marketing decisions (Donaldson & Preston, 1995; Greenley & Foxall, 1998; Miller & Lewis, 1991; Ogden & Watson, 1999).

Managers often try to be orientated toward each of their stakeholders or stakeholder groups. This is what Greenley, Hooley, & Rudd (2005, p.1 484) call a *multiple stakeholder orientation profile* (MSOP) and define it as "the simultaneous ordering of attitudes towards each set of primary stakeholder interests and allocated managerial behaviour to serve these interests". The authors differentiate between three variations in MSOPs: (1) internal focus MSOP with emphasis on employees, (2) ownership focus MSOP emphasizing shareholders,

and (3) market focus MSOP where the customer is focused on; the latter being more comprehensive than a market orientation approach, since it simultaneously addresses customers and other main stakeholders⁴⁵. Depending on culturally embedded attitudes towards the separate stakeholders, managers will decide on which of them they will address (Berman, Wicks, Kotha, & Jones, 1999; Donaldson & Preston, 1995; Woodward & Birkin, 1996).

2.4.1.8 The Resource-Based View of Market Orientation

Both Kohli and Jaworski (1990) and Narver and Slater's (1990) definitions of market orientation reflect the construct as business behaviour. Tuominen and Moeller (1996) refer to market orientation as business behaviour that can be viewed as market information processing and interfunctional co-ordination of market-related information. From this point of view, market orientation can be seen as being resource-based and organizations following this approach are characterized as "heterogeneous bundles of resources and rent seekers, aiming their strategies at obtaining superior performance in the form of Ricardian rents"⁴⁶, (Olavarrieta & Friedmann, 1999, p.217).

The resource based view of an organization (Wernerfelt, 1984) or the focus on 'core competencies' (Prahalad & Hamel, 1990) has contributed significantly to the explanation of business performance (Grant, 1995). While the term *resource based view of the firm* emerged from Wernerfelt's (1984) work, the concept itself originated from Penrose (1959). However, it was only in the 1980s⁴⁷ and in the early 1990s⁴⁸ that the concept was fully developed. Previously, marketing academics used the concepts to explain the effects of marketing on

⁴⁵ The MSOP types have later been refined to four types: MSOP based on competitors, customers, employees and shareholders.

⁴⁶ = economic rent (defined as [t]hat portion of the produce of the earth paid to the landlord for the use of the 'original and indestructible powers of the soil'; the excess of the return from a given piece of cultivated land over that from land of equal area at the 'margin of cultivation'. Also called economic rent, or Ricardian rent. Economic rent is due partly to differences of productivity, but chiefly to advantages of location; it is equivalent to ordinary or commercial rent less interest on improvements, and nearly equivalent to ground rent) Webster (1913)

⁴⁷ cf. Coyne, 1986; Ghemawat, 1986; Hall, 1989; Hansen & Wernerfeld, 1988

⁴⁸ cf. Amit & Schoemaker, 1993; Barney, 1991; Grant, 1991; Mahoney & Pandian, 1992; Stalk, Evans, & Schulman, 1992; Williams, 1992

performance and competitive advantage (Aaker, 1989; Bharadwaj et al., 1993; Day, 1994a; Day & Wensley, 1988; Hunt & Morgan, 1995, 1996; Webster, 1992). The resource-based view of an organization has been developed in the field of strategic management (Hooley, Fahy, Cox, Beracs, Fonfara, & Snoj, 1999). Greenley et al. (2005) call this development a true revolution in the field of strategic management. While Porter (1980) suggested the key to strategy lies in the inherent dynamics and characteristics of a specific industry and that these are the driving factors of profitability, the new resource based view explains performance from the inside of the company itself, as opposed to the industry in which it operates. The new approach suggests that the resource profile of an organization essentially drives performance and “that the source of superior performance [lies] in the possession and deployment of distinctive, hard to imitate or protected resources” (Greenley et al., 2005, p.1 484)⁴⁹.

Hooley et al. (1999) describe the underlying logic to the resource-based view as being relatively simple and outline it as following: in order to achieve the desired outcome of the managerial effort, namely the sustainable competitive advantage, which in turn will lead to superior performance, it is necessary to possess a number of key resources. These include value adding for customers (Coyne, 1986), barriers to duplication (Bharadwaj, Varadarajan, & Fahy, 1993; Collis & Montgomery, 1997), as well as being applicable (Amit & Schoemaker, 1993; Collis & Montgomery, 1995; Grant, 1991). The resources can have the form of assets (Aaker, 1989; Amit and Schoemaker, 1993; Davidson, 1997; Day, 1994a; Fahy and Smithee, 1999; Grant, 1991; Hooley & Saunders, 1993) or capabilities (Fahy & Smithee, 1999; Grant, 1991; Hooley, Moeller, & Broderick, 1998; Hooley, Saunders, & Piercy, 1998; Mahoney, 1995; Moeller & Antilla, 1987; Teece, Pisano, & Shuen, 1997).

Frameworks for both understanding marketing processes (Webster, 1992) and capabilities (Day, 1994a) have been proposed. According to Webster (1992) the three main

⁴⁹ See e.g. Morgan, Vorhies, & Schlegelmilch (2006) for empirical evidence.

point-of-views on marketing are: (1) *marketing as a strategy*, (2) *marketing as tactics*, and (3) *marketing as a culture*. The first point of view focuses on market segmentation, targeting and positioning (cf. Hooley et al., 1998), whereas the tactical or operational level promotes the classic 4P-approach: product, price, promotion and place (McCarthy, 1960).

Considering marketing as a culture, market orientation, as discussed before, plays an important role. Particularly the question whether an orientation itself can be viewed as a key resource and therefore adds to developing a sustainable competitive advantage (Hunt & Morgan, 1995) is of great interest.

The second perspective, capabilities, has mainly been influenced by the work of Day (1994a), who categorized capabilities into (1) *outside-in* (within the organization), (2) *inside-out* (outside the organization) and, (3) *spanning processes*⁵⁰. More recently, a fourth category, *networking capabilities*, has also been focused on (Egan, 1995; Groenroos, 1994; Gummerson, 1999). In the field of capabilities, market orientation also plays a vital role as part of market sensing (Day, 1994a). This also includes two parts of Kohli and Jaworski's (1990) definition of market orientation – the organization wide dissemination of information and the response to it – as well as Narver and Slater's (1990a) conceptualization of market orientation as customer and competitor orientation and inter-functional co-ordination. Hooley et al. (1999, p.262) describe the important difference between the two as “creating a *culture* that is sensitive to the market in the Narver and Slater view” as opposed to “the more *specific processes* involved in understanding and researching that market *à la* Kohli and Jaworski”.

Ruekert (1992) proposes three dimensions that market orientation is comprised of, but did not provide formal names for them. Following Burgess (2003), in the present research, these dimensions will be referred to as *insight*, *intent* and *interaction*. This resource-based

⁵⁰ For details, see Webster (1992).

view of an organization underlines the development of those competencies that are requirements for market-orientated behaviours.

Based on Ruekert's (1992) first dimension of a market orientation (collection and use of customer information), *insight* refers to those skills of an organization that foster the collection and interpretation of information about demand and supply, as well as on managing them effectively. Burgess (2006) describes these competencies as encouraging the process of learning, innovativeness and relatedness to stakeholders and the environment. Burgess' (2003) second factor, *intent*, refers to Ruekert's second dimension, the development of a strategy that meets customer needs and stands for the plan itself, its objectives, as well as allocated resources. Market orientation is directly related to the degree of the consideration and satisfaction of customer needs and wants. Therefore, intent is both market-driven (Day 1999) and market-driving (Jaworski et al., 2000; Kumar et al., 2000). *Intent* stands for the development of expertise that supports the conversation within the organization and therefore builds a shared vision among its members. The last factor, *interaction*, is based on Ruekert's third dimension and refers to the implementation of the aforementioned strategy, and is conceptually similar to Narver and Slater's (1990) *interfunctional coordination* to deliver customer value, as well as to Kohli and Jaworski's (1990) *responsiveness*. Although showing substantial similarities, Ruekert's approach differs from Kohli and Jaworski (1990), Narver and Slater (1990) and Shapiro (1988) in that it emphasises "the development and execution of business unit strategy as the key organizing focus of market orientation" (Ruekert, 1992, p.229). Interaction as a competency of market oriented organizations puts emphasis on profitable relationships with stakeholders. It is concerned with customer and stakeholder interactions as well as with the related financial structures and systems (Burgess, 2006).

2.4.1.9 Relationship Marketing Orientation (RMO)

Relationship marketing orientation (RMO) is still an emerging paradigm in marketing (Sin, Tse, Yau, Lee, & Chow, 2002). Adopting a RMO has proven to be related to superior business performance⁵¹. Sin et al. (2002) explain the development towards a RMO with the shift of business philosophy from production orientation via selling orientation to a market orientation and finally to a RMO (Gruen, 1997; Groenroos, 1989). Following three prevailing definitions of RMO by Berry (1983), Groenroos (1991) and Harker (1999), the concept includes a focus on the individual buyer-seller relationships that are longitudinal in nature, and beneficial to both parties in each individual buyer-seller relationship (Sin et al., 2002). The authors summarize that “from a firm’s perspective, the relationship marketing concept can be viewed as a philosophy of doing business successfully or as a distinct organizational culture/value that puts the buyer-seller relationship at the center of the firm’s strategic or operational thinking” (Sin et al., 2002, p.657-658).

2.4.2 Empirical Measurement of Market Orientation

In order to quantify the degree of market orientation of a company, a large variety of measurement instruments exists. Probably the two most widely known scales were developed in the late 1980s. Established independently, the MKTOR (Narver & Slater, 1990a, b) and MARKOR (Kohli et al., 1993) scales were developed as elements of broader studies on market orientation. Both scales have subsequently been validated by the authors in an international context and used in a multitude of studies⁵². Many scholars consider these two scales as most suitable to determine an organization’s or business unit’s market orientation (e.g. Deng & Dart, 1994; Greenley, 1995a; Oczkowski & Farrell, 1997). In addition to developing a synthesised scale, Deshpandé and Farley (1996, 1998a, b) probably offer the most complete study that examines the validity and reliability of the two earlier scales (Narver

⁵¹ e.g. Berry, 1983; Blattberg & Deighton, 1991; Fuhrman, 1991; Gummeson, 1994; Morgan & Hunt, 1994; Yau et al., 2000

⁵² For a review and meta-analysis see Kirca et al. (2005).

& Slater, 1998). The authors show that MARKOR and MKTOR, as well as their own market orientation scale, yield similar results and are reliable between and within organizations in an international and multi-sector environment. However, Oczkowski and Farrell (1997), for instance, concluded that both scales are problematic. In their study, a satisfactory fit was only found when some of the items were removed. Additionally, critics point out that, depending on the specific environment under investigation, the dimensions of market orientation and its attributes will have to be determined in order to measure the construct correctly (Bello, Polo, & Vázquez, 1999). Although MARKOR and MKTOR have most often been operationalized, other scales can be found in a multitude of studies (Deng & Dart, 1994; Deshpandé & Farley, 2004; Lado & Maydeu-Olivares, 2001; Liu, Luo, & Shi, 2003; Ruekert, 1992; Shapiro, 1988; Wu, 2004)⁵³.

In the following section, four different approaches to measuring market orientation will be reviewed and their suitability for the present study will be discussed.

2.4.2.1 MARKOR

Market orientation can be described in terms of a degree on a continuum, as opposed to being present or absent, since the extent to which an organization generates, disseminates and responds to market intelligence varies (Kohli & Jaworski, 1990). In 1993, Kohli, Jaworski and Kumar published MARKOR, a freestanding scale to measure the degree of market orientation. Prior to the development of the scale, Kohli and Jaworski (1990) set up a conceptual path model including factors that affect market orientation, operationalizing their definition of the construct. By conducting personal interviews, the authors generated and validated a set of items that matched their definition of market orientation. The development of their scale was based on non-linear factor analysis of samples from senior marketing and non-marketing executives of more than 200 strategic business units (SBU). The scale is made

⁵³ For a recent review see Kirca et al. (2005).

up of 20 items, six for regarding the generation of market intelligence, five items for the dissemination of the gathered intelligence and nine for the organization's response to it. Kirca et al. (2005, p.473) conclude: "[k]ey attributes of the measure include (1) a focus on customers of the SBU *and* the forces that drive their needs and preferences, (2) activity-based items, not business philosophy, and (3) a demarcation of a general market orientation factor and associated component factors".

Literature also presents some critique on MARKOR. According to Kirca et al. (2005), Kohli et al.'s (1993) scale represents an important step forward in the measurement of market orientation. However, there are several methodological, substantive, and application issues that need to be considered (cf. Diamantopoulos & Hart, 1993; Oczkowski & Farrell, 1998). A discussion on these is offered by Lado et al. (1996). The authors criticise Kohli et al.'s (1993) equation of market orientation using the implementation of the marketing concept, which, according to Thomas (1994) and Webster (1994) has no universally accepted definition, without clearly stating on which of the conceptions of marketing they rely on. Another point of concern is that distributors, the environment and stakeholders only get paid little attention to in the equation of market orientation. The assumption of Kohli et al. (1993) that the interviewed managers fully understand the concept of market orientation and its identity also raises concern, since at the time not even in literature was a common agreement on the concept. The authors' last critique on MARKOR regards the generalizability of the results due to methodological issues, such as the diversity of characteristics and sectors found among the organizations used for the development of the scale, as well as the relatively small sample size used.

2.4.2.2 MKTOR

Narver and Slater (1990a) developed a scale to measure market orientation, including 15 factor-weighted items. The authors used a self-administered questionnaire with top

managers of 140 SBUs of one large corporation to obtain evidence of the reliability and validity of the scale. The scale comprises of three components: customer orientation (six items), competitor orientation (four items), and interfunctional coordination (five items).

As with the MARKOR scale, MKTOR is also subject to detailed academic criticism (Siguaw & Diamantopoulos, 1995; Oczkowski & Farrell, 1998). Webster (1994) for instance criticises the use of culture to interpret some of Narver and Slater's (1990a) results without specifically measuring the organization's culture. Lado, Maydeu-Olivares and Rivera (1996) mention the sole reliance on a theoretical background for the assignment of items to the scale and call the authors' work 'suspect' from a methodological point of view. Even the theoretical driven assignment of the generated items has been called questionable (Siguaw & Diamantopoulos, 1995), since their empirically match to the components had not been tested. As for Kohli et al.'s (1993) scale, MKTOR neglects "the importance of the distributors and the environment as stakeholders in their operationalization of market orientation" (Lado et al., 1996, p.23) and therefore "adopts a focused view of markets by emphasizing customers and competition" (Kohli et al., 1993, p.467). The authors also find fault with neglecting the speed of the generation and dissemination of market orientation within the organization, as well as the inclusion of items in the scale that do not concern themselves specifically with market oriented activities and behaviours.

2.4.2.3 *Deshpandé, Farley and Webster's Scale*

Based on a meta-analysis, Deshpandé and Farley (1996) summarized earlier market orientation scales developed by Narver and Slater (1990), Jaworski and Kohli (1993), and Deshpandé, Farley and Webster (1997) and came up with a short 10-item scale to measure market orientation. According to them, market orientation equals customer orientation. However, following the reviews of Kirca et al. (2005) and Cano et al. (2004), the point of view published in these working papers has not received much support.

2.4.2.4 *Ruekert's Scale*

Capturing most of the elements of Narver and Slater (1990a) and Kohli and Jaworski's (1990) concepts, Ruekert (1992) developed a 23-item scale to measure the degree of market orientation in organizations. It is structured in three dimensions⁵⁴: use of customer information (nine items), development of a market oriented strategy (eight items), and execution or implementation of the strategy (six items). In terms of validity and reliability, Ruekert's scale to measure market orientation is able to deliver reliable results and has been used by researchers many times during the last decade (e.g. Burgess & Nyajeka, 2005; Greenley, 1995a). In their study, Burgess and Nyajeka (2005) label Ruekert's (1992) scale as an ideal tool for measuring market orientation in a low income country (LIC) context and call its performance admirable.

For the present study Ruekert's (1992) approach to measuring market orientation has been found most useful, since it represents a combination of Kohli and Jaworski's (1990) and Narver and Slater's (1990) conceptualization (i.e. behavioural and philosophical-cultural elements) of the construct and focuses on the business unit level of an organization.

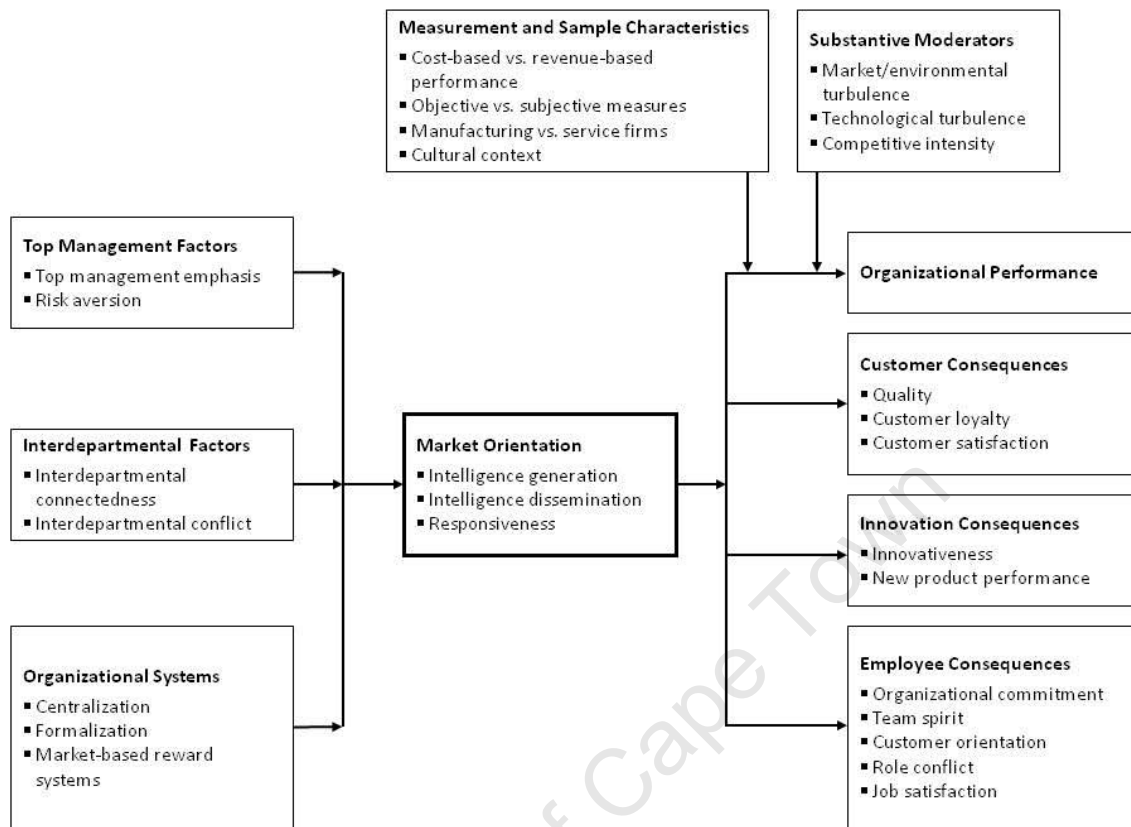
2.4.3 *Antecedents and consequences of Market Orientation*

Throughout the past two decades, researchers and scholars have spent a lot of effort investigating the antecedents and consequences of market orientation in order to understand the construct and its importance for an organization. Reviewing the existing literature on market orientation and the technique of meta-analysis, Kirca et al. (2005) developed a conceptual framework that depicts the relationships between those antecedents and consequences of market orientation that have been subject to most frequent research, as well as the potential moderators on the market orientation-performance relationship.

⁵⁴ cf. Burgess & Nyajeka (2005): insight, intent and interaction

Figure 4

Antecedents and Consequences of Market Orientation



Adapted from Kirca et al. (2005, p.26) and Deshpandé (1999, p.106).

Briefly, the framework is composed of four factors: (1) antecedent conditions that foster or hinder a market orientation, (2) the market orientation construct, (3) consequences of a market orientation, and (4) moderator variables that either strengthen or weaken the relationship between market orientation and business performance (Deshpandé, 1999, p.20). This framework will be used to structure the following review of the antecedent and consequences of market orientation. In addition to Kirca et al.'s (2005) work, other authors assessed the market orientation construct and its antecedents from an individual-level point of view. Although most research focuses on the organizational level, a market-oriented culture depends on the attitudes and actions of the organization's managers and employees. For a recent overview and model, see Schlosser and McNaughton (2007). The research efforts on the topic are summarized in *Table 10* and *Table 11*.

Table 10

Research on the Antecedents of Market Orientation

Senior management characteristics	
Emphasis on Market Orientation	Kohli & Jaworski (1990); Jaworski & Kohli (1993); Slater & Narver (1994a); Pulendran & Speed (1996a)
Risk aversion	Kohli & Jaworski (1990); Jaworski & Kohli (1993); Gounaris & Avlonitis (1997)
Professional attitude	Bhuian (1992); Wood & Bhuian (1993)
Attitude towards marketing	Mokwa (1981); Bhuian (1992); Wood & Bhuian (1993)
Importance given to success factors	Gounaris & Avlonitis (1997)
Interactions with customers	Harris & Piercy (1997)
Organizational features	
Organizational size	McNamara (1972); Miles & Arnold (1991); Liu (1995); Llonch & Waliño (1996)
Resources and capabilities	Tuominen et al. (1997)
Organizational culture	Wong et al. (1989); Dunn et al. (1994); Harris & Piercy (1997)
Entrepreneurship	Morris & Paul (1987); Miles & Arnold (1991); Bhuian (1992)
Organizational structure	
Centralization, formalization, departmentalisation	Kohli & Jaworski (1990); Jaworski & Kohli (1993); Liu (1995); Gounaris & Avlonitis (1997); Harris & Piercy (1997)
Marketing planning	Pulendran & Speed (1996a, b)
Control	Jaworski & Kohli (1993); Liu (1995); Pelham & Wilson (1996); Borghgraef & Vebeke (1997)
Interdepartmental dynamics	
Conflict	Kohli & Jaworski (1990); Jaworski & Kohli (1993); Harris & Piercy (1997)
Connectedness	Kohli & Jaworski (1990); Jaworski & Kohli (1993); Harris & Piercy (1997)
Recruiting	Kohli & Jaworski (1990); Jaworski & Kohli (1993); Ruekert (1992)
Training	Kohli & Jaworski (1990); Ruekert (1992); Jaworski & Kohli (1993)
Reward system	Kohli & Jaworski (1990); Ruekert (1992); Jaworski & Kohli (1993); Widing II, Speed, Brown, Heide, & Olson (1997)
External factors	
The environment (macro)	Selnes et al. (1996)
The environment (micro)	Dobscha et al. (1994); Greenley (1995a, b); Gounaris & Avlonitis (1997)
Perceived environmental turbulence	Davis et al. (1991); Bhuian (1992)

Adopted from Cervera et al. (2001, p.1 264).

Table 11

Research on the Consequences of Market Orientation

Market Orientation and Performance	
Overall Performance	Narver & Slater (1990a); Jaworski & Kohli (1993); Ruekert (1992); Slater & Narver (1994a,b); Greenley (1995a); Slater & Narver (1996)
Innovation	Zirger & Maideque (1990); Aaby & Discenza (1993); Greenley (1995a); Atuahene-Gima (1996); Slater & Narver (1996); Jaworski & Kohli (1996); Gatignon & Xuereb (1997); Hurley & Hult (1998); Han et al. (1998)
Business profitability	Narver & Slater (1990a); Slater & Narver (1994a); Llonch & Waliño (1996); Slater & Narver (1996); Lado et al. (1998)
Financial performance	Ruekert (1992); Llonch & Waliño (1996); Siguaw et al. (1998)
Sales	Llonch & Waliño (1996); Slater & Narver (1996)
Excellence	Diamantopoulos & Hart (1993)

<i>Employee response</i>	
Esprit de corps	Kohli & Jaworski (1990); Jaworski & Kohli (1993)
Satisfaction with the job	Ruekert (1992)
Commitment	Ruekert (1992)
Co-ordination	Greenley (1995a)
<i>Consumer response</i>	
Satisfaction & loyalty	Kohli & Jaworski (1990); Jaworski & Kohli (1993)
<i>Channel relationships</i>	
Trust, commitment	Siguaw et al. (1998)
Market orientation and competitive strategy	Smith et al. (1992); Bruning & Lockshin (1994); Day (1994a); Day & Nedugandi (1994); Hunt & Morgan (1995); Slater & Narver (1996)

Adopted from Cervera et al. (2001, p.1 269).

2.4.3.1 Antecedents of Market Orientation

“Antecedents to a market orientation refer to the organizational factors that enhance or impede the implementation of the business philosophy represented by the marketing concept” (Deshpandé, 1999, p.20). Following Jaworski and Kohli (1993), Kirca et al. (2005) categorize the antecedents to market orientation hierarchically into *individual*, *intergroup*, and *organizationwide* factors: (1) senior/top management factors, which include *top management emphasis*; (2) interdepartmental dynamics including *interdepartmental connectedness* and *conflict*, and (3) organizational systems representing *centralization*, *formalization*, *market-based reward systems*, and *market-oriented training*. Research showed that by focusing on these factors, managers could improve the degree of market orientation in their organizations (Kirca et al., 2005).

Since this research will focus on the antecedents to market orientation rather than the moderators and consequences, the relationships between the factors and how they improve market orientation will be outlined in the next section⁵⁵. The meta-analysis of more than 100 studies by Kirca et al. (2005) showed that the level of market orientation could be assumed to increase if the top management of an organization emphasises market orientation. Behaviours and attitudes, as well as interdepartmental connectedness and conflict, play an important role.

⁵⁵ For detailed information on other relationships within the model see Kirca et al. (2005).

Market-based reward systems have a positive influence on market orientation, as does the top management's tolerance towards acceptable risks. Formalization, centralization and a high degree of interdepartmental conflict have a negative impact on the level of market orientation.

Top management factors. The main goal of managers who run market-orientated organizations is to serve the customer better. Top management plays an important role when it comes to an organization's values and orientations (e.g. Felton, 1959; Hambrick & Mason, 1984; Webster, 1988), since only when managers clearly signal that responding to customer needs is important can an organization be market oriented (Levitt, 1969; Webster, 1988). That means that top managers should track market changes, share the gained information on the markets and respond to them. If the organization's emphasis lies on the importance for managers to do so, a market orientation can be developed (Day & Nedungadi, 1994; Narver & Slater, 1990).

Sometimes the required actions come with the risk of failure. The construct of risk has multiple facets such the perception of outcome uncertainty, outcome likelihood and the potential outcome range (Sitkin & Pablo, 1992)⁵⁶. Often, the response to market information is the change of existing products or the introduction of new ones, which is normally connected to certain risk. According to Jaworski and Kohli (1993) top management's willingness to take such risks or encourage behaviours that could occasionally lead to failures in order to offer a better service is one of the factors that influence market orientation. Risk taking is an important part of innovation and is firmly related to an organization's capability to create knowledge (Rogers, 1995; Smith et al., 2005). Avoiding such risks works against innovation and improving market-orientated strategies. In other words, market orientation is negatively influenced by managers who are unwilling to take the risk of failure in order to assure the success of a new strategy prior to implementing it (Jaworski & Kohli, 1993).

⁵⁶ For a detailed review of the concept of risk see Mitchell (1995).

Interdepartmental factors. The next factor, interdepartmental conflict/interdepartmental connectedness, which pertains to the dynamics within the departments, refers to conflicts within the company that are negative for the information flow and cooperation across the departments, which, when absent, negatively affect market orientation (Jaworski & Kohli, 1993).

Conflicts within departments can arise from tensions through incompatibilities of actual and required responses among units (Jaworski & Kohli, 1993; see also Gaski, 1984; Raven & Kruglanski, 1970) and hinder communications (Ruekert & Walker, 1987). This, in turn, is negative for a market orientation (Felton, 1959; Levitt, 1969; Lusche et al., 1976), because it limits both coordination and implementation of organization-wide dissemination and response to market information (Shoham, Rose, & Kropp, 2005). Burgess and Nyajeka (2005) address the problematic that market orientation literature generally considers *interdepartmental conflict* a uni-dimensional construct. However, as reviewed in Polzer et al. (2002), there is a distinction between *relationship conflicts* that limits the sharing of information - as it can cause psychological as well as physical disengagement of the employees from an organization - and *task conflicts* that, if moderate, can enhance information sharing (see Polzer et al., 2002) and, if avoided, can impact negatively on the comprehensiveness of marketing strategies (Atuahene-Gima & Murray, 2004).

Interdepartmental connectedness refers to the direct contact between employees across departments, both formally and informally (Jaworski & Kohli, 1993). It is important for a market-oriented organization that employees are connected, because this leads to an exchange of information as well as its utilization (Cronbach & Associates, 1981; Deshpandé & Zaltman, 1982; Kennedy, Goolsby, & Arnould, 2003).

Organizational systems. The third set of antecedents, factors pertaining to the organizational structure and systems of the companies, are centralization, formalization and

employee related systems. Centralization and formalization have both shown to affect market orientation negatively by hindering intelligence generation and dissemination, as well as the responsiveness of the company, although formalization can help to implement a market-orientated strategy if, for instance, the given rules directly foster the implementation of market oriented behaviours (Jaworski & Kohli, 1993). “Formalization represents the degree to which rules define roles, authority relations, communications, norms and sanctions, and procedures” and “[c]entralization refers to the inverse of the amount of delegation of decision-making authority throughout an organization and the extent of participation by organizational members in decision making” (Jaworski & Kohli, 1993, p.56). The degree of centralization is highest if the decision-making authority and responsibility lies with one person only. Kirca et al. (2005) found that a centralized decision-making structure does not necessarily prevent an organization from being market oriented if top management emphasis on the other interdepartmental connectedness and appropriate market-based reward systems is ensured. Jaworski and Kohli (1993) add another factor that has a negative influence on market orientation, departmentalization, which refers to the compartmentalization or segregation of departments that deal with organizational activities.

Employee related systems, such as market-orientated *reward systems* that use market-oriented behaviours as metrics to reward employees, have been found instrumental in shaping employee behaviour (Anderson & Chambers, 1985; Hopwood, 1974; Jaworski, 1988; Lawler & Rhode, 1976) and therefore, by motivating employee actions, are positively related to market orientation (Kirca et al., 2005). According to Kohli and Jaworski (1990) and Ruekert (1992), rewarding managers and employees for objective outcomes and behaviours that positively affect the company's long-term results, “encourages them to think more strategically” (Deshpandé, 1999). Therefore, the factor market-orientated *reward systems* is positively related to market orientation.

2.4.3.2 Consequences of Market Orientation

Jaworski and Kohli (1996) have categorized the consequences of market orientation into *organizational performance*, *customer consequences*, *innovation consequences*, and *employee consequences* (cf. Kirca et al., 2005).

Market oriented organizations develop market-sensing and customer-linking capabilities, which in turn result in superior performance (Day, 1994a; Hult & Ketchen, 2001). *Organizational performance* can be divided into cost-based performance measures and revenue-based performance measures. In 1993, Jaworski and Kohli added a new form of performance, namely the manager's perceived performance of the business, which can be measured by comparing the performance with the organization's objectives or competing organization's performance. Slater and Narver (1994b) describe market-oriented organizations as being well prepared to offer goods and services that satisfy customer needs. *Customer consequences* include quality, customer loyalty and customer satisfaction (Jaworski & Kohli, 1993, 1996). Market oriented organizations create and maintain superior customer value and therefore increase customer's perception of the products and service quality (Brady & Cronin, 2001). Jaworski and Kohli (1993) describe *employee consequences* as a sense of pride among the employees to belong to an organization that commonly dedicates a great deal of work toward the satisfaction of its customers. This sense of belongingness in turn fosters a commitment to the organization, as well as employee job satisfaction (Kirca et al., 2005). Employee consequences have been researched extensively: for instance, an organization's emphasis on employee recruitment, training and compensation (Horng & Chen, 1998; Jaworski & Kohli, 1993; Puledran et al., 2000; Ruekert, 1992; Selnes et al., 1996; Shoham & Rose, 2001) and effects on employee commitment and satisfaction (Caruana, Ramaseshan, & Ewing, 1999; Horng & Chen, 1998; Jaworski & Kohli, 1993; Jones et al., 2003; Selnes et al., 1996; Shoham & Rose, 2001; Siguaw et al., 1994). Innovativeness, which stands for an organization's ability to come up with new ideas, such as customer oriented products and

processes (Hult & Ketchen, 2001) and the success of new products, i.e. their performance (Im & Workman, 2004), are part of *innovation consequences*. Both factors of *innovation consequences* result from a market orientation, because of its focus on information use in order to meet customer needs (Atuahene-Gima, 1996; Han et al., 1998).

Firm innovativeness. Rogers (1995) defines innovation as an idea or object that is perceived to be new by an individual or an agency (also see Robertson & Yu, 2001). Tyler (2001) explains the concept of innovation as consisting of new knowledge about how things can be done better than before. Damanpour (1991, p.560) distinguishes between different elements of innovation: “technical innovations pertain to products, services, and production process technology; they are related to basic work activities and can concern either product or process,” whereas “administrative innovations involve organizational structure and administrative process; they are indirectly related to the basic work activities of an organization”. However, “organizational performance may depend more on the congruency between innovations of different types than on each type alone” (Damanpour, 1991, p.582). Hurley and Hult (1998) suggest that innovation orientation refers to an organization's commitment to be innovative and to encourage change by the adoption of new technologies, skills and resources. Market orientation, together with organizational performance, new product performance and firm innovativeness, represent the core aspects of a strategic marketing (Bear & Frese, 2002; Calantone, Cavusgil, & Zhao, 2002; Gatignon & Xuereb, 1997; Gima, 1995; Liu, Luo, & Shi, 2002; Webster, 1992). Innovativeness is an important characteristic of an organization, since it can lead to a gain in competitive advantage through the opportunity of expanding into new areas. The generation, acceptance, and implementation of innovative products, processes and services are closely tied to the acquisition and dissemination of, and the responsiveness to information (Calantone et al., 2002). It is widely agreed that learning climate, corporate entrepreneurship and firm innovativeness are

correlated constructs (Erdil, Erdik, & Keskin, 2005) and studies on their linkages have been conducted (Hurley & Hult, 1998; Liu et al., 2002).

Erdil et al. (2005) divide organizational innovativeness into four dimensions: product innovativeness, innovation in production processes (Victor, Boynton, & Stephens, 2000), work organization, and human resource management practices (Bear & Frese, 2002).

An important contribution by Jaworski and Kohli (1996) links market orientation to innovation. More specifically, the authors suggest market orientation to be an antecedent to innovation and Liu et al. (2003) conclude that the greater the level of market orientation in an organization the more innovative it is⁵⁷. The importance of innovation as a function of management is due to its link to business performance. Slater and Narver (1994b) suggest that innovation is one of the core value-creating capabilities of an organization, directly affecting its performance. Many studies demonstrated the existence of this link⁵⁸. The majority of studies indicate a robust positive relationship between innovation and performance (Han et al., 1998). Similarly to Slater and Narver (1994b), Deshpandé et al. (1993) speculate on a causal relationship between market orientation, innovation and business performance.

Learning orientation. Following Fiol and Lyles (1985), Sinkula (1994), and Morgan, Katsikeas and Appiah-Adu (1998), Hooley, Greenley, Fahy and Cadogan (2001, p.510) define learning as “the process of gathering, analysing, internalising and acting on, external and internal information to improve the fit between the organization and its markets”. *Learning orientation* is the organization-wide focus on values defining the ability to generate, share, utilise and manage knowledge (Sinkula et al., 1997). Another prominent approach to define organizational learning comes from Narver and Slater (1995), who draw on Huber's (1991)

⁵⁷ Other studies that found a close relationship between market orientation and innovation include Agarwal, Erramilli and Dev (2003); Appiah-Adu and Singh (1998); Han et al. (1998); Matear, Osborne, Garrett and Gray (2002); Maydeu-Olivares and Lado (2003); Slater and Narver (1996); Vázquez, Santos and Álvarez (2001).

⁵⁸ e.g. Damanpour & Evan, 1984; Damanpour, Szabat & Evan, 1989; Khan & Manopichetwattana, 1989; Zahra, de Belardino & Boxx, 1988

work defining the construct as the development of insights that potentially influence organizational behaviour. Organizations who want to develop a competitive advantage increasingly make a point of building refined learning competencies (Burgess & Bothma, 2007). Market orientation has been associated with an efficient resource allocation (Chang & Chen, 1998). In contrast to other activities, not only is the formulation of the business strategy affected, but also its execution (Dobni & Luffman, 2003). An efficient resource allocation includes the providing of discipline, cohesion and internal coordination (Pelham & Wilson, 1996). Values, such as a commitment to learning, a shared vision about the object of the learning, open-mindedness, as well as the sharing of available and new knowledge, are factors that foster a learning orientation (Calantone et al., 2002). Organizations with a distinct orientation towards learning are aware of the positive effects on strategic and financial performance (Yeniyurt, Cavusgil, & Hult, 2005).

Next to *innovativeness*, various studies relate *learning orientation* to a market orientation⁵⁹. Additionally, *entrepreneurship orientation* has been related to a market orientation⁶⁰, complementing the concept of innovation orientation (Mavondo, Chimhanzi, & Stewart, 2005). The combination of organizational innovativeness, learning orientation, entrepreneurship orientation, and a market orientation leads to competitive advantage and hence to superior performance (Hult & Ketchen, 2001; Hult, Snow & Kandemir, 2003; Liu et al., 2003; Slater & Narver, 1995). In addition to its direct effect on an organization's financial and strategic performance (e.g. Baker & Sinkula, 1999b; Farrell, 2000), a learning orientation has an effect on market orientation (Baker & Sinkula, 1999b; Calantone et al., 2002; Sinkula et al., 1997) in that it reinforces the positive effects of market orientation on performance by encouraging market oriented behaviours (Baker & Sinkula, 1999b). In contrast to a market orientation that comprises the generation, dissemination and responding to intelligence, a

⁵⁹ e.g. Baker & Sinkula, 1999a; Farrell, 2000; Hurley & Hult, 1998; Noble, Sinha, & Kumar, 2002; Santos, Sanzo, Álvarez, & Vázquez, 2001

⁶⁰ e.g. Atuahene-Gima & Ko, 2001; Barret & Weinstein, 1998; Becherer & Maurer, 1997; Matsuno, Mentzer, & Özsomer, 2002; Wood et al., 2000

learning orientation sets focus on the questioning of knowledge (Sinkula et al., 1997). “Market orientation facilitates, but does not guarantee, optimal learning. Learning orientation facilitates, but does not guarantee, responsiveness to customers and other stakeholders” (Burgess & Bothma, 2007, p.481).

Marketing literature is not clear about the affiliation of organizational learning to the antecedents or consequences of a market orientation, and Santos-Vijande, Sanzo-Pérez and Álvarez-González (2005) conclude that neither possibility is exclusive. Looking at the concept of market orientation and the description of organizational learning, Bell, Deighton, Reinartz, Rust and Swartz (2002) emphasize that the similarities of both a market- and a learning-orientation help to describe the organizational phenomena of market sensing, company culture and norms. Interdependency between individuals and groups, as well as the coordinated use of intangible resources, are also part of both concepts. Slater and Narver (1995) suggest that organizational learning is encouraged and assisted by a market orientation (see also Farrell, 2000). In their opinion, market-orientation is a key element of organizational culture and this stimulates organizational learning. In order for higher order learning to happen, Slater and Narver propose entrepreneurship as another element of organizational culture. According to Hooley et al. (2001), learning contributes positively to the process of a competitive advantage by helping to accumulate and understand marketing assets and capabilities. Following a behavioural approach, Baker and Sinkula (1999b) consider market orientation a necessity to achieving higher order organizational learning, but this can only be realized in combination with a learning orientation. Day (1994b), on the other hand, refers to the act of organizational learning as an antecedent of a market orientation. Baker and Sinkula (1999b) see no causal relationship between a market- and a learning-orientation, and therefore treat the two concepts as being distinct organizational characteristics⁶¹.

⁶¹ For a detailed discussion of the topic, see Santos-Vijande et al. (2005).

2.4.3.3 Market Orientation and Performance

The impact of a market orientation on business performance, formalized in the twin papers of Narver and Slater (1990a) and Kohli and Jaworski (1990), is well documented in scholarly research⁶². Although it is important to mention that a few studies report a non-significant or even negative relationship^{63,64}, the overwhelming majority of studies report a positive relationship between market orientation and business performance.

Most of the data originate from studies in industrialized, western countries. Although Deshpandé and Farley (2004) state that the impact of market orientation is highest in LICs because of the relatively low adoption of a market orientation, notable exceptions can be found (e.g. Appiah-Adu, 1998a; Bhuian, 1997, 1998; Mavondo, 1999a; Sin et al., 2005). That is why there is an increasing call for market orientation research in LICs⁶⁵. Early studies of the market orientation-performance relationship focused on organizations in the United States and the United Kingdom (Bhuian, 1998; Deshpandé & Farley, 1999; Subramanian & Gopalakrishna, 2001), but some studies use samples from multiple countries (e.g. Deshpandé et al., 1997; Hooley et al., 2000; Saini, Johnson, & Grewal, 2002). In case of cross-national studies, methodological issues have arisen (Mavondo, 1999b; Shoham & Rose, 2001) and mostly developed countries have been compared, as opposed to developing countries or LICs, which lead to a call for extending the research in this direction (Deshpandé et al., 1997; Homburg & Pflesser, 2000; Kohli et al., 1993).

⁶² e.g. Baker & Sinkula, 1999b; Cano et al., 2004; Deshpandé & Farley, 2004; Harris, 2001; Kirca et al., 2005; Matsuno & Mentzer, 2000

⁶³ e.g. Chan & Ellis, 1998; Gray, Matear, Boshoff, & Matheson, 1998; Greenley, 1995a; Grewal & Tansuhaj, 2001; Han et al., 1998; Harris, 2001; Langerak, 2003; Siguaw & Honeycutt, 1995

⁶⁴ For an overview and meta-analysis see Kirca et al. (2005).

⁶⁵ e.g. Batra, 1999; Cano et al., 2004; Deshpandé & Farley, 2004; Grewal & Tansuhaj, 2001; Hooley et al., 2000; Nakata & Huang, 2005; Sin et al., 2000; Subramanian & Gopalakrishna, 2001; Tse et al., 2003

The general claim of market orientation positively affecting long-term viability and performance (Mavondo et al., 2005) has even be used in the discussion of criterion-related validity of market orientation measures⁶⁶.

Table 12

Research on the Consequences of Market Orientation

Market orientation and performance

Overall performance	Narver & Slater (1990a); Jaworski & Kohli (1993); Ruekert (1992); Slater & Narver (1994a,b); Greenley (1995a); Slater & Narver (1996)
Innovation	Zirger & Maideque (1990); Aaby & Disenza (1993); Greenley (1995a); Atuahene-Gima (1996); Slater & Narver (1996); Jaworski & Kohli (1996); Gatignon & Xuereb (1997); Hurley & Hult (1998); Han et al. (1998)
Business profitability	Narver & Slater (1990a); Slater & Narver (1994a); Llonch & Waliño (1996); Slater & Narver (1996); Lado et al. (1998)
Financial performance	Ruekert (1992); Llonch & Waliño (1996); Siguaw et al. (1998)
Sales	Llonch & Waliño (1996); Slater & Narver (1996)
Excellence	Diamantopoulos & Hart (1993)

Employee response

Esprit de corps	Kohli & Jaworski (1990); Jaworski & Kohli (1993)
Satisfaction with the job	Ruekert (1992)
Commitment	Ruekert (1992)
Co-ordination	Greenley (1995a)

Consumer response

Satisfaction & loyalty	Kohli & Jaworski (1990); Jaworski & Kohli (1993)
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Channel relationships

Trust, commitment	Siguaw et al. (1998)
Market orientation and competitive strategy	Smith et al. (1992); Bruning & Lockshin (1994); Day (1994a); Day & Nedugandi (1994); Hunt & Morgan (1995); Slater & Narver (1996)

Adopted from Cervera, Mollá & Sánchez (2001, p.1 269).

In addition to Kirca et al.'s (2005) work, other authors assessed the market orientation construct and its antecedents from an individual-level point of view. Although most research focuses on the organizational level, a market oriented culture depends on the attitudes and

⁶⁶ e.g. Deng & Dart, 1994; Deshpande & Farley, 1998a, b; Gray et al., 1998; Kohli et al., 1993; Lado et al., 1996; Soehadi, Hart, & Tagg, 2001

actions of the organization's managers and employees⁶⁷. *Table 12* summarizes the research efforts on the consequences of market orientation.

2.4.3.4 Empirical Measurement of Performance

The following section will shed some light on the different methods to measure an organization's performance. There are various ways to measure performance, ranging from objective, secondary measures, to more subjective measures that involve the use of managerial perceptions. The pros and cons of the different approaches will be outlined, and their suitability for the present study will be discussed. The discussion focuses on the significance of the obtained data, cultural issues, possible biases and the practicability of the method.

Methodology performance measures. An ever-changing business environment has led to significant changes in methodologies of performance measures (Anderson & McAdam, 2004). Neely and Bourne (2000) even called it a revolution. Conventional measures do not sufficiently illustrate organizational performance anymore (Anderson & McAdam, 2004), therefore both business and academic research has addressed the problem extensively (Bassione, Price, & Hassan, 2005; Marr & Schiuma, 2003). "Performance measures are the vital signs companies use to monitor the health of their businesses" (Leandri, 2001, p.39). Rouse and Putterill (2003, p.795) define performance measure as "the comparison of results against expectations with the implied objective of learning to do better."

Linking business and cultural concepts to performance requires the specification of how to measure performance. Assuming that managers try to maximize profits, the profitability of a business unit plays an important role. Classic indicators of profitability include the *return on sales* (ROS), showing the profits as percentage of the sales, and the *return on investment* (ROI), showing the profits as a percentage of investment; the latter being

⁶⁷ For a recent overview and model see Schlosser and McNaughton (2007).

superior as a measure of business performance, because it relates results to resources and is therefore used by the majority of companies to measure performance (see Reece & Cool, 1978). These data can be supplemented by the measure of the business unit's net cash flow. Ramaswami et al. (2004) for example adapted the measure used by Moorman and Rust (1999), obtaining objective data and computing average growth over time to measure financial performance. In their approach, they used (1) return on assets, (2) net profits, and (3) sales and market share.

A limitation to the use of objective data is its availability. This is particularly true, but not exclusively so, of companies that are not public and that often do not make their complete information available to researchers (Ramaswami et al., 2004). This is the reason for studies often relying on subjective measures of performance (e.g. Dawes, 1999; Harris, 2001).

No matter how the profitability of a business unit is measured, it can differ vastly. Reasons for this can be both management tactics and economic conditions (Buzzell & Gale, 1987). In case of the present study, these year-to-year fluctuations make the latter measures of profit rather impractical. More important is the average profitability during a multi-year period. However, “[e]ven when profitability is computed or estimated over a period of several years, [...] it is not a complete measure of business performance” (Buzzell & Gale, 1987, p.25). Criticism on management practices for the high emphasis on short-term results that leads to losses in the long-term competitive strength, was widely announced in America during the 1980s (see Hayes & Abernathy, 1979). In light of the fact that it takes years for the results of strategic change within an organization to transpire “an ideal measure of business performance would take into account both the short-term effects of a strategy and its eventual impact on the market value of shareholders' equity” (Buzzell & Gale, 1987, p.25).

In order to balance short-term and long-term financial performance, organizations follow different strategies at the same time (e.g. Hauser & Katz, 1998; Kaplan & Norton,

1996). Morgan and Rego (2006) propose three measures of performance that are commonly used by managers to provide pertinent insights. (1) An industry-independent and risk-adjusted indicator of long-term shareholder value (Anderson, Fornell, & Mazvancheryl, 2004; Tirole, 1997) that compares market value to the replacement costs of its assets (Tobin, 1969) is Tobin's q (Lewellen & Badrinath, 1997). Tobin's q , named after its developer James Tobin, compares an organization's value (determined by financial markets) with the value of its assets (Tobin, 1969). Because of its higher dependence on a company's profits as opposed to its accounting practices (e.g. Dechow, Kothari, & Watts, 1998; Sloan, 1996), (2) cash-flow, which refers to the measure of the company's ability to generate cash, indicates shareholder value in a better way than other measures (Neill, Schaefer, Bahnson, & Bradbury, 1991; Srivastava, Shervani, & Fahey, 1998). The last measure proposed by Morgan and Rego (2006, p.33) is the (3) gross margin, which specifically measures "a firm's ability to convert costly inputs into valuable outputs". It expresses the relationship between gross profit and sales revenue (see also Bell et al., 2002; Ittner & Larcker, 1998).

However, since this study uses data from separate business units, and since business units might not sell their products or services to the open market or pay dividends to their shareholders, the creation of value is more complex. Buzzell and Gale (1987, p.26) propose the value-based planning-approach that applies "the same logic to business units as to entire corporations" to both measuring past performance and estimating future performance. According to Buzzell and Gale (1987) there are two important components when applying this approach to small business units, namely the appropriately discounted generated cash flow over a certain period of time and the unit's change in market value.

History of performance measures. Two decades ago, a general dissatisfaction about traditional financial performance measurement systems evolved and authors started arguing for change (Bourne, Mills, Wilcox, Neely, & Platts, 2000). Anderson and McAdam (2004) list

several shortcomings in lag performance measure that have been identified by Bourne et al. (2000), Manoochehri (1999) and Neely (1998): traditional financial performance measures that report the consequences of past action (Kaplan & Norton, 2001), (1) encourage short-termism (Banks & Wheelwright, 1979; Hayes & Garvin, 1982), (2) lack strategic focus (Skinner, 1974), (3) encourage local optimisation (Hall, 1983), (4) give misleading signals for continuous improvement and innovation (Kaplan & Norton, 1992), and (5) are not externally focused in relation to customers and competitors (Camp, 1989; Kaplan & Norton, 1992). This traditional approach of performance measure is insufficient for today's business evaluation (Drucker, 1993) and the key to successfully long-term competing is managing the intangible resources (Barsky & Bremser, 1999). In his historic overview on marketing performance, Clark (1999) indicates the three directions marketing performance measures have moved in during the last decades.

(1) From financial⁶⁸ to non-financial⁶⁹ output measures: Examining the financial output of an organization was one of the early methods to measure marketing performance. In this way, on a company level, it was possible for managers to maximise outputs by allocating marketing resources accordingly. Therefore, extensive profitability analyses of marketing efforts were necessary. Both profitability and other measures from the finance literature were used⁷⁰. Buzzell and Chussil (1985) and Day and Fahey (1988) developed a more refined measure using cash flows and net present value of the different strategies. Securing the best possible financial performance and therefore ensuring the highest value for a company's owners, is generally what companies wish to achieve (Kristensen & Westlund, 2004). The increasing use of non-financial measures of performance was a result of uncovering

⁶⁸ e.g. Goodman (1970, 1972); Sevin (1965): (Profit); Feder (1965): (Sales Revenue); Buzzell & Chussil (1985); Day & Fahey (1988): (Cash Flow)

⁶⁹ e.g. Buzzell & Gale (1987); Szymanski, Bharadwaj, & Varadarajan (1993): (market share); Walker & Ruekert (1987); Bhargava, Dubelaar, & Ramaswami (1994): (adaptability); Anderson & Sullivan (1993); Voss, Parasuraman, & Grwal (1998); Hauser, Simester, & Wernerfelt (1994); Peterson & Wilson (1992); Fornell, Johnson, Anderson, Cha, & Bryant (1996): (customer satisfaction); Anderson & Sullivan (1993); Fornell et al. (1996); Dick & Basu (1994): (customer Loyalty); Aaker & Jacobson (1994); Keller (1993); Simon & Sullivan (1993): (brand equity)

⁷⁰ For more information on the relationship of financial outputs to marketing inputs, see Sevin (1965) and Goodman (1970, 1972).

moderating factors between marketing inputs and financial outputs (e.g. Bonoma & Clark, 1988). Researchers focused particularly on market share as an output variable that could be used to predict cash flow and profitability (Henderson, 1973; Buzzell & Gale, 1987). However, this relationship is far from perfect (Jacobson, 1988; Szymanski et al., 1993). Other factors that moderate marketing productivity measures are the quality of services provided (Bucklin, 1978) and the adaptability and innovativeness of the marketing (Bhargava et al., 1994; Walker & Ruekert, 1987). Newer developments of non-financial output measures include (1) *customer satisfaction*, which has become an important benchmark in many industries (Clark, 1999) and topic of research (see Halstead, Hartman, & Schmidt, 1994; Yi, 1990), (2) *customer loyalty*, which leads to lower marketing costs and increases revenue per customer (e.g. Reichheld, 1994) and (3) *brand equity*, which is believed to be the greatest marketing asset of a company (Barwise, 1993; Keller, 1998), since it “(1) allow[s] firms to charge price premiums over unbranded or poorly branded products; (2) can be used to extend the company's business into other product categories; and (3) reduce[s] perceived risk to customers” (Clark, 1999, p.717) and investors (Aaker & Jacobson, 1994; Simon & Sullivan, 1993).

(2) From output to input measures⁷¹: Early models such as the *marketing audit concept*, which is used to evaluate a company's marketing activities in connection to its overall situation (see Brownlie, 1993; Rothe, Harvey, & Jackson, 1997), were developed in order to assess marketing inputs that lead to better performance. Therefore, it is necessary to evaluate and understand the environment a company is functioning in and examining its assets and marketing (Kotler et al., 1977). One of the most recent and most complete approaches to evaluate a company's marketing inputs derives from the marketing orientation concept as

⁷¹ e.g. Piercy (1986); Srivastava et al. (1998): (marketing assets); Kotler, Gregor, & Rodgers (1977): (marketing audit); Bonoma & Crittenden (1988): (marketing implementation); Day & Nedungadi (1994); Deshpande & Farley (1998a, 1998b); Han et al. (1998); Kohli & Jaworski (1990); Kohli et al. (1993); Jaworski & Kohli (1996); Naver & Slater (1990, 1998); Slater & Narver (1994a); Wrenn (1997); Ruekert (1992): (market orientation).

described in previous sections, which focuses on the development and use of market intelligence.

(3) From unidimensional to multidimensional measures⁷²: Kotler et al.'s (1977) marketing audit started the move away from unidimensional marketing performance measures, using only few variables to predict marketing outputs to multidimensional measures (e.g. efficiency and effectiveness, Walker & Ruekert, 1987). Kumar, Stern and Achrol's (1992) approach to research reseller performance, as well as the incorporation of Kotler's (1977) marketing effectiveness construct (Dunn, Norburn, & Birley, 1994) were also influential in the move toward multiple dimensions.

An approach to measure business results used by Avlonitis and Gounaris (1999) was to ask respondents to rate financial measures such as ROI, operative measures and efficiency measures in relation to the objectives set in the company. A similar method was used by Moorman and Rust (1999), who asked their respondents to rate firm performance relative to their firm's or SBU's stated objectives (also used by Gatignon & Xuereb, 1997; Jaworski & Kohli, 1993; Olson, Walker, & Ruekert, 1995). Moorman (1995) found that rating performance relative to the firm's stated objectives compares well to comparing performance to competitors. ROI was also used as a variable in Langerak and Commandeur (1998) and Pelham and Wilson (1996). Other variables, such as sales, which has also been used by Langerak and Commandeur (1998), Pelham and Wilson (1996) and Slater and Narver (1994a), success of new products, which was a variable in the studies of Langerak and Commandeur (1998) and Slater and Narver (1994a), and benefits, which have been measured by Avlonitis and Gounaris (1999) and Pelham and Wilson (1996), can also be found in literature.

⁷² e.g. Bonoma & Clark (1988); Dunn et al. (1994): (efficiency); Walker & Ruekert (1987): (effectiveness)

Performance measurement frameworks. Kristensen and Westlund (2004) recommend three quality standards when referring to Accountable Business Performance Measurement (ABPM): (1) measuring business performance in a structural context, which stands for measuring both stakeholder performance criteria and their enablers and consequences, (2) relevance of the measured data, and (3) reliability, precision and robustness of the construct.

A number of frameworks can be found in management accounting literature. *Table 13* gives an overview of performance measure frameworks. Important contributions are the early work of Anthony (1965) followed by Cross and Lynch (1989), Beischel and Smith (1991), Kaplan and Norton (1992), Kennerley and Neely (2000) and Otley (1999)⁷³. Frameworks clarify boundaries, specify dimensions or views and “may also provide initial intuitions into relationships among the dimensions. They should not be treated as models, but nonetheless form a good starting point for model building as part of theory development” (Rouse & Putterill, 2003, p.792).

Table 13

Performance Measure Frameworks

Du Pont's pyramid of financial ratios

Chandler, 1977)	Scholars acknowledge Du Pont and his pyramid of financial ratios as laying the foundation of financial performance measurement (Chandler, 1977). Du Pont's performance framework (Du-Pont-Ratio system) emphasizes traditional lag performance measures and brings them into a hierarchical order at the various levels of the organization. Being a static observation system, it measures the efficiency of the company's use of capital to generate profit (Werner, 2000). Therefore, it has several shortcomings of up-to-date performance measurement frameworks.
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Balanced Performance Measurement Matrix

Keegan, Eiler, & Jones (1989)	Keegan et al.'s (1989) balanced performance measurement matrix seeks to integrate financial and non-financial, as well as internal and external measures of business performance (Neely, Adams, & Crowe, 2001). Although it integrates different classes of business performance, this matrix does not specifically address the existence of different dimensions of business performance. However, according to Neely (2002) the balanced performance measurement matrix is a solid framework that can accommodate any kind of performance measure.
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⁷³ For a recent review and synthesis of the literature see Kennerley and Neely (2000) and Otley (1999).

Balanced Scorecard

Kaplan & Norton (1992) Kaplan and Norton's (1992) goal was to overcome problems with performance measurement systems by providing the organization with a balanced set of measures that enables managers to quickly gain a comprehensive idea of the company's performance (Letza, 1996). The balanced scorecard with its four perspectives (financial perspective, internal business perspective, innovation and learning perspective, and the customer perspective) offers a 'multi-facet view' of a company's performance (Atkinson & Brown, 2001), including financial, non-financial, internal and external classes of performance (Neely et al., 2001).

Measures for time-based competition

Azzone, Masella, & Bertele (1991) Azione et al. (1991) are very specific in terms of what to measure in their framework. The difference to other frameworks is the suggestion of time as a factor in competitive advantage. Measures such as R&D engineering time, operations throughput time and sales and marketing order processing lead-time reflect both efficiency and effectiveness, and therefore measure time-based competition.

Performance Pyramid System

Lynch & Cross (1991) Tying together the hierarchical view with the business process view on performance (Neely, Mills, Platts, Richards, Gregory, Bourne, & Kennerley, 2000), Lynch and Cross (1991) improved Judson's (1990) original performance pyramid system. The system is designed to measure organizational performance (1) at the corporate level, (2) the strategic business unit, as well as (3) at the different departments of the company (Laitinen, 2002). Hudson, Smart and Bourne (2001) criticize the performance pyramid system, since it does not clearly denote details of the actual measurement instruments or their development.

Performance Measurement Framework

Ballantine & Brignall (1995) Ballantine and Brignall (1995) offer a very detailed and comprehensive performance measurement framework. This framework includes core elements, such as a control model and multiple dimensions of performance, non-core elements, including for example Just-In-Time (JIT), Total Quality Management (TQM), benchmarking and life-cycle management, and contingent variables such as life-cycle stages and the internal environment.

Brown's input, processes, outputs and outcomes framework

Brown (1996) Anderson and McAdam (2004) describe Brown's (1996) 'input, processes, outputs and outcomes framework' as conceptually appealing and useful. Brown adopts the theory that each of the stages drives the performance of the following one, therefore connecting the measures through cause and effect.

The performance Prism

Neely et al. (2001) Neely et al. (2001) try to address the shortcomings of the frameworks described before. Neely (2002) describes their *performance prism* as a 'second-generation' performance management framework, since it has been designed to be so flexible that one can provide a broad as well as a narrow focus. Its multi-faceted nature is due to its five interrelated perspectives namely (1) stakeholder satisfaction, (2) strategies, (3) processes, (4) capabilities, and (5) stakeholder contribution. According to Neely (2002) the performance prism can provide a balanced view on the organization including internal as well as external measures of performance, financial and non-financial measures and measures of efficiency and effectiveness.

Partly adopted from Anderson and McAdam (2004), Kaplan (2001) and Neely et al. (2001).

Once the measurement of business performance has been defined, the actual results have to be judged by a standard. This can be done by comparing the results to the organization's own past experience, which leads to a "near-universal format of "This Year vs.

Last Year”” (Buzzell & Gale, 1987, p.26). However, fluctuations in the market and industry make this approach rather weak. Compare the organization’s results to the averages in the same industry is more appealing, since these are also influenced by the same factors (Buzzell & Gale, 1987). Due to the multi-dimensional nature of business performance (Jaworski & Kohli, 1993) that can be characterised in many ways (Walker & Ruekert, 1987), it is a complex task (see Lenz, 1981; Venkatraman & Ramanujam, 1987) and there are very diverse methods (Ruekert, Walker, & Kohli, 1996; Bienstock, 1994) to measure it reliably. There is a close association between using objective measures and perceptive measures of organizational performance (see Dess & Robinson, 1984; Pearce, Robbins & Robinson, 1987; Venkatraman & Ramanujam, 1987).

In many areas of research, perceptual measures are used to measure business performance (see e.g. Deshpande et al., 1993; Jaworski & Kohli, 1993) and, due to the high correlation of objective measures (Balakrishnen, 1996; Venkatraman & Ramanujam, 1986), it is a widely accepted method (Harris & Ogbonna, 2001), although there is a danger of obtaining a false positive (Type I error) when measuring performance subjectively (Dawes, 1999). Ramaswami, Bhargava and Srivastava (2004) adopted a scale to measure financial performance from Moorman and Rust (1999). The respondents were asked to rank their organization’s performance relative to its stated objectives, using sales, profitability, market share, net operating margins and return on assets. Although not as common in the general management and strategy literature, the use of perceptual measures of operational and financial performance frequently appear in the extant empirical operations management literature (Ketokivi & Schroeder, 2004). Distinguishing between single-item measures and multi-item measures, Ketokivi and Schroeder (2004) propose the following three classes of performance measures: (1) operationally defined measures, (2) perceptual measures, and (3) quasi-perceptual measures. However, this definition is not completely inarguable; Cano et al. (2004) for example, add that although mainly based on financial data, the reports of objective

information could also be subjective since some of the data might be subject to managerial decisions.

Perceptual⁷⁴ versus objective measures of performance. The important question whether the widely used perceptual measures of performance are appropriate in academic research has been addressed by Ketokivi and Schroeder (2004).

Reliability versus validity of the measurement instrument. “All measurement instruments must satisfy the criteria of reliability and validity. A reliable instrument measures with consistency, that is, with little random measurement error (yet it may or may not measure the right thing). A valid instrument, in turn, measures what it is theoretically purported to measure (but it can do this with either high or low consistency)” (Ketokivi & Schroeder, 2004, p.248).

It should be the goal of any researcher to satisfy both of these fundamentally distinct criteria (Bollen, 1989). In their meta-analysis Cano et al. (2004) summarize the work of previous authors and their attempts to measure performance in connection with market orientation. A number of authors state that there is a significant difference between the findings of subjective and objective performance scales used in marketing research (e.g. Bommer, Johnson, Rich, Podsakoff, & MacKenzie, 1995; Harris, 2001). However, recent literature relying on perceptual measure of performance seems to outnumber other types (Ketokivi & Schroeder, 2004). In favour of using subjective measures is the fact that, following Hoffman et al. (1991), there is no proof of objective measures being more predictive than subjective ones. On the contrary, subjective data obtained by management evaluations of performance are more holistic than their objective counterparts (Cano et al., 2004). In their meta-analysis, the authors even found that the relationship between market orientation and business performance is stronger using subjective measures. Particularly for

⁷⁴ The terms 'perceptual' and 'subjective' are used interchangeably to describe self-reported perceptual measures of performance.

multi-country and multi-industry studies, generalizability of empirical data can be difficult when imposing operational definitions of performance (Ketokivi & Schroeder, 2004). Ketokivi and Schroeder (2004) make the successful use of perceptual measures subject to four premises: (1) the traits in question are salient (2) multiple items are used as this increases reliability of the data (3) it is possible to partition item variance into trait, method and error (=multiple methods are used) and (4) the methods used are maximally different (see also Doty & Glick, 1998). Following Ketokivi and Schroeder (2004), it would be good to use both self-reports and independent raters. A greater reliability is also forecast when obtaining a combination of perceptual and operationally defined performance data in the same study.

It is often necessary that studies make use of self-reported perceptual measures, since objective data is unavailable (Ailawadi, Dant, & Grenwal, 2004). Ailawadi et al. (2004, p.89) reported a “significantly positive but far from perfect” correlation between perceived and objective performance and even introduces subjective performance measure as “desirable in many situations” (Ailawadi et al., 2004, p.78). On the other hand, objective measures of variables, such as product quality and innovation, show much stronger associations to perceptive performance than they do to objective performance (Voss & Voss, 2000; Szymanski, Kroff, & Troy, 2003).

Ketokivi and Schroeder (2004) named the combination of operationally defined and perceptual measures *quasi-perceptual* measures. In this case “the content of the measure is defined according to an operational definition, but the measurement units are defined as perceptual” (Ketokivi and Schroeder, 2004, p.251). An example would be rating a company’s ROI or profit relative to a competitor’s or own target on a given scale⁷⁵. Boyer, Leong, Ward and Krajewski (1997) argue that by using quasi-perceptual measures, researches can obtain relevant performance measures such as the rate of growth without risking a high non-response

⁷⁵ e.g. Schlegelmilch & Ram (2000)

rate. Feldman (1981) argued that the use of simple ratings would be more accurate than those that demand higher cognitive abilities from the respondents (cognitive complexity). Therefore, the rating method might have an impact on the correlation between subjective and objective performance measures.

There are three different methodological categories to rate performance (Rich, Bommer, MacKenzie, Podsakoff, & Johnson, 1999): (1) relative measures, where the rater compares the performance to another organization/SBU's performance, (2) absolute measures, where the rater compares the performance to some absolute standard, and (3) a combination of the two. However, Rich et al. (1999, p.48) did not find a significant "influence [on] the strength of the relationship between objective and subjective measures of performance". The rating format could also influence the relationship between the results of subjective and objective performance measures. Following Heneman (1986, p.813) who argued that "because the demands for observation, storage, retrieval, and judgement are great [...] any method that simplifies the task might strengthen the relationship between [objective] and [subjective measures]", Rich et al. (1999) found that two formats dominate in literature: overall and composite⁷⁶ ratings, of which the latter leads to an increased correlation between objective and subjective measures, because of its higher accuracy of the results. Ailawadi et al. (2004) emphasize the serious problems researchers can face when using self-reported measures, namely bias due to *common method variance* (see also Bagozzi & Yi, 1991; Campbell & Fiske, 1959; Podsakoff, MacKinzie, Lee, & Podsakoff, 2003), which has been shown to represent a significant share of the total variance in the measured constructs (Cote & Buckley, 1987; Williams, Cote, & Buckley, 1989). *Common method variance* is the result of using a single measurement method to measure multiple constructs at once. An internal consistency between the variables can occur due to their common source. The measurement-

⁷⁶ Composite ratings capture a variety of 'lower order' performance items as opposed to the overall performance of an organization/SBU.

tool itself, in the case of the present study the questionnaire, can affect the measured constructs and their correlation (Baumgartner & Steenkamp, 2001). Ailawadi et al. (2004) mention format effects and response style as the most frequently cited sources of common method variance. In case of self-reported data, there might also be a tendency of the respondents to answer in a similar way although the items or constructs do not correlate.

Respondents as a source of bias. Probably the simplest form of all respondent bias is the honesty of the respondents when answering the performance questions (Huber & Power, 1985). Responses could not reflect what is but what should be (Ketokivi & Schroeder, 2004). Another form of respondent bias is called random error and occurs for instance if a respondent simply does not know the answer to the question or cannot decide between two adjacent answer categories⁷⁷. In addition to the measurement instrument and methodology, the respondents themselves affect the accuracy of the outcome when using subjective measures of performance. It has been shown that experience of the respondents affects their judgement of performance in the way that they are more confident about their perception. However, this does not mean their judgements will be more accurate (Mezias & Starbuck, 2003; Swann & Gill, 1997). In addition, the number of times respondents had to provide information on performance might have a positive effect on its accuracy (Maule & Hodgkinson, 2003). Ailawadi et al. (2004) point out the risk of introducing inaccuracy and bias when measuring performance, as well as its antecedents perceptually. Psychological processes such as “positive illusions and cognitive consistency as well as predictions of self-serving attributions in individuals” (Ailawadi et al., 2004, p.77) lead to significant differences between perceived performance and objective performance. For instance, it has been shown that respondent answers are biased toward a positive view of themselves (Taylor & Brown, 1988) unless they have low self-esteem, in which case the bias is negligible (Coyne & Gottlieb, 1983). Another

⁷⁷ Documentation of problems with self-reported data is offered for instance by Bagozzi and Yi (1990); Bollen and Paxton (1998); Crampton and Wagner (1994); Doty and Glick (1998); Huber and Power (1985); Phillips (1981); Podsakoff and Organ (1986).

process identified in psychological literature is the need for cognitive consistency, which refers to the effect that people alter their cognitions in order to maximize their internal consistency (Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968). Another important issue is the self-serving bias, which refers to protecting one's self-esteem by blaming others (or external factors) for failures and crediting success to one's own actions (Bradley, 1978; Campbell & Sedikides, 1999; Folkes, 1988). In this context, it has been found that respondents are not always very accurate when judging an organization's performance (e.g. Mezias & Starbuck, 2003). However, Ailawadi et al. (2004, p.78) state that "neither random inaccuracy nor systematic mean-shifts (e.g., everybody thinks and/or claims that their performance is better than it really is) in perceptions of performance pose a serious problem for the researcher who wishes to study the relationship between performance and other marketing variables".

Ailawadi et al. (2004) point out some pitfalls that one has to be careful about when using the same respondents to both report on performance and its potential antecedents in a subjective manner. This is particularly true "when the nature of the variables being measured is such that respondent's psychological need for consistency, ego enhancement, or ego protection is likely to be aroused" (Ailawadi et al., 2004, p.94). As a solution to this problem, Ailawadi et al. (2004) propose to use either different respondents within the company for each subject or, if this is not possible, using multiple methods to measure performance.

In their meta-analysis on salesperson performance, Rich et al. (1999, p.42) suggest that subjective and objective measurement methods are not interchangeable "and that the choice of the most appropriate measure may require a trade-off between accurately tapping the domain of the performance construct and minimizing measurement error". Bommer et al. (1995) also found only a weak correlation between objective and subjective measures of performance in their meta-analysis, and Rich et al. (1999) outline the fact that they did not explore moderator

subgroups of samples, and therefore in certain situations, subjective and objective measures could be reasonably interchangeable. Nevertheless, more than half of the studies included in Hartley, and Walker's (1985) meta-analysis on salesperson performance use subjective measures either from managers, peers, or self-reports.

Churchill, Ford, Hartley and Walker (1985) distinguish between two types of objective measures of performance - those that control for externalities and those that do not. Concerning salesperson's performance, Rich et al. (1999) found that the controlling for externalities decreased the correlation between the results of subjective and objective performance measures. According to Ailawadi et al. (2004, p.79) "the measure of perceived performance also taps into financial performance, which avoids a "mismatch" with the objective measure" since these are not different dimensions in principal. "[C]hanges in perceived performance are significantly associated with changes in objective performance" (Ailawadi et al., 2004, p.90).

Another reason that supports the use of perceptual measures of performance is that some important dimensions, such as 'long-term orientation', which are not covered by objective measures of performance, might be included in the perceptive measure (Anderson, 1990; Jaworski & Kohli, 1993; Kumar et al., 1992). When arguing for the use of perceptual measures, one should also shed some light on the disadvantages of the alternative: objective measures. Not only is unavailability of data a problem, but serious doubts on using objective data have been raised by some researchers, particularly for large-sample research, where inferences are made to populations (Ketokivi & Schroeder, 2004). Following Ward, McCreery, Ritzman and Sharma (1998) results of objective questions are not inevitably more reliable than results of relative scales. In addition, the comparability of operationally defined measures across industries, competitive environments, and even within industries is

questionable since the data is dependent on accounting systems, capital structure, and so forth (Bozarth & Edwards, 1997).

A number of authors have found consistencies between executive's perceived performance and objective data⁷⁸, and Doyle, Saunders and Wright (1989) report frankness among businessmen reporting data on performance. Some authors even go one step further and describe objective measures as not suitable for research purposes (Fisher & McGowan, 1983; Day & Wensley, 1988).

Particularly interesting for the present study is the fact that performance measured in a subjective way may be more comparable across international contexts than data based on objective accounting records (Deshpandé & Farley, 2003; Farley, 2004). This might be due to differences in accounting methods (Ailawadi et al., 2004), different perceptions of what is high or low in terms of performance across different nations, different reporting requirements, or ownership structures (Deshpandé & Farley, 2004). One of the most important reasons for the subjective approach to measure performance valid for the present study is that the respondents of the target group are often unwilling or unable to share objective data about the performance of their organization. In addition, Moorman and Rust (1999) argue for the use of subjective performance measures with the difficulty of creating valid measures of performance across industries, as well as most strategy research uses subjective measures of performance.

To maintain the advantage of perceived performance measures, whilst simultaneously ensuring high quality data Ailawadi et al. (2004) suggest to explicitly instruct respondents to benchmark their organization's performance against competitors. This is in line with the

⁷⁸ e.g. Covin, Slevin, & Schulz, 1994; Dess, 1987; Dess & Robinson, 1984; Golden, 1992; Hart & Banbury, 1994; Powell, 1992; Venkatraman, 1990; Venkatraman & Ramajuman, 1986; Verhage & Waarts, 1988

methodology of Buzzell and Gale's (1987) PIMS⁷⁹ principles has subsequently been used in various other studies (e.g. Kohli, Shervani, & Challagalla, 1998; Sujan, Weitz, & Kumar, 1994). However, this can be a source of common variance, since respondents can have different ways to interpret what 'against competitors' means (Ketokivi & Schroeder, 2004).

Another approach found in literature is to rate the organization's performance relative to its stated objectives (e.g. Gatignon & Xuereb, 1998; Jaworski & Kohli, 1993; Tobin, 1969). This was found to correlate with subjective evaluations of performance comparing it to competitors (Moorman, 1995).

Both managers and academic researchers make extensive use of methods measuring performance in a subjective manner. Whether the obtained data are valid or not is a rather sensitive question and discussed extensively in literature (Ailawadi et al., 2004). It should also be kept in mind that "the validity of the perceived-performance measure is influenced by the context, specifically, by which other variables are being studied and how they are being measured" (Ailawadi et al., 2004, p.66). In addition to the above-mentioned studies, Lusch and Brown (1996) asked respondents to compare their performance to the performance of others in terms of sales growth, profit growth, overall profitability, labour productivity, and cash flow. Moorman and Rust (1999) focus the subjective performance measures on (1) *firm financial performance* (perceived profitability and market performance of the organization/SBU)⁸⁰, (2) *customer relationship performance* (perceived ability to satisfy and retain customers by offering good quality and services)⁸¹, (3) *new product success* (perceived financial performance, speed, and creativity of new product service development)⁸². *Table 14* gives an overview on studies in various industries using perceptual measures for performance.

⁷⁹ The PIMS project started in 1972. Its main focus is on the relationships between market structure, market strategies, and business performance. Since its launch, the associated data have been used to identify and understand different business principles related to marketing strategies and performance (Kotabe, Duhan, Smith, & Wilson, 1991).

⁸⁰ Adopted in part from Griffin & Page (1993) and Moorman (1995)

⁸¹ Adopted in part from Griffin & Page (1993)

⁸² Adopted in part from Griffin & Page (1993) and Moorman (1995)

It is not meant to be a complete list but rather serves as another argument for the suitability of perceived measures of performance for this study.

Table 14

Studies Relying on Perceived Measures of Performance

Szymanski et al. (2003); Farley (2004); Cano et al. (2004); Deshpandé & Farley (2004); Jaworski & Kohli (1993); Harris & Ogbonna (2001); Deshpandé et al. (1993); Venkatraman & Ramanujam (1987); Dess & Robinson (1984); Pearce et al. (1987); Venkatraman & Ramanujam (1986); Balakrishnen (1996); Dawes (1999); Moorman & Rust (1999); Voss & Voss (2000); Anderson (1990); Kumar et al. (1992); Lusch & Brown (1996); Doney & Cannon (1997); Kohli et al. (1998); Sujaan et al. (1994); Moorman (1995); Ketokivi & Schroeder (2004); Covin et al. (1994); Dess (1987); Golden (1992); Hart & Banbury (1994); Powell (1992); Venkatraman (1990); Verhage & Waarts (1988); Robinson & Pearce (1988); Hoffman, Nathan, & Holden (1991); Ailawadi et al. (2004); Deshpandé & Farley (2003)

Partly adopted from Ketokivi and Schroeder (2004) and Cano et al. (2004).

2.4.3.5 Moderators of the Market Orientation - Performance Relationship

As outlined before, the relationship between market orientation and business performance has been well documented. The market orientation-performance link in particular was the subject in over 200 studies using various methods. However, a number of studies also report only weak or non-significant results. This disparity suggests that the market orientation-performance link might be moderated by additional variables. Although a number of individual studies worked on resolving these issues, for instance by comparing different measurement instruments or by meta-analysis of a variety of existing studies, Ellis (2006) reports a lack of definite conclusions on the moderating variables.

Market turbulence, competitive intensity, and technological turbulence have been identified as moderators of the market orientation-performance relationship (Jaworski & Kohli, 1993). All of these enhance market uncertainties and organizations should respond to them by spending resources for market-oriented activities (Dwairi, Bhuian, & Jurkus, 2007). Jaworski and Kohli (1993, p.57) define market turbulence as “the rate of change in the composition of customers and their preferences”. Turbulent markets force organizations to modify their products and services constantly, in order to be able to satisfy changing customer needs. Organizations operating in a stable market environment, on the other hand, do not have to change their products and services continuously, since customer preferences do not change

a lot (Jaworski & Kohli, 1993). This is why, when facing market turbulence, businesses are forced to act more market oriented as opposed to those facing stable markets and hence business performance will be higher at these organizations. In the words of Jaworski and Kohli (1993, p.57): “a market orientation is likely to be more strongly related to business performance in turbulent markets than in stable markets”. If an organization faces no competition, such as in a monopoly, its performance can be good without a distinct market orientation. On the other hand, if customers have many alternative sources to satisfy their need for services and products, organizations that are not market oriented are likely to lose their market share to competitors. That is why Jaworski and Kohli (1993, p.57) argue that “[t]he greater the competitive intensity, the stronger the relationship between a market orientation and business performance”. Harris (2001) empirically supports this, but results are inconclusive since other scholars could not replicate these results (e.g. Subramanian & Gopalakrishna, 2001). The next environmental factor, *technological turbulence*, describes the rate of technological change. Enabling the organization to understand and react to customer needs, a market orientation can be described as a means to developing a competitive advantage. However, in some cases other factors might play an important role for the success of a business. Jaworski and Kohli (1993) propose technology as such an alternative to a market orientation. Emerging technologies often undergo a rapid change as the market develops. In this case, technological innovation can be the reason for a competitive advantage. Therefore, technological turbulence negatively influences the market orientation-performance relationship, since innovation represents a powerful ‘alternative’ to a market orientation. However, Jaworski and Kohli (1993) emphasise that the competitive advantage through technological innovation will at most diminish the importance of a market orientation, but not eliminate it completely.

Another moderator discussed in literature is the research setting. Chan and Ellis (1998) speculated that the country where the data are collected influences the potency of the market

orientation-performance link. However, extensive research in non-American environments⁸³ argue against this speculation (Ellis, 2006). In the same line of research, Cano et al. (2004) report significant differences between service and manufacturing industries. For the same level of market orientation, Cano et al. (2004) report higher business performances for service than for manufacturing firms (see also Gray & Hooley, 2002; Kirca et al., 2005). Theoretical support for this can be found in Anderson, Fornell and Rust (1997). Ellis (2004) found that the larger the home market the greater the exposition to sources that enhance market orientation such as intelligence. This is due to short distances between the organizations and their sources of market intelligence. In small markets, on the other hand, a lack of customers might force an organization to export their goods and services and thereby increasing the distance to the source of market intelligence. Slater and Narver (1994a) found market growth to be a moderator of the market orientation-performance relationship. Ellis (2005) reports the performance of market oriented organizations to be higher in mature economies due to their characteristic stable demand, intense competition, short channels and sophisticated buyers. In less developed economies, with uncertain demand and rapid market growth, on the other hand, the author describes a market orientation as less valuable for the organization. Kohli and Jaworski (1990, p.15) even claim that in conditions of strong demand “an organization may be able to get away with a minimal amount of market orientation”. Cano, et al. (2004) found a stronger relationship between market orientation and performance for non-profit organization than for profit organizations resulting in a better performance for non-profit organizations with the same level of market orientation. Other moderators include organizational culture and climate (Deshpandé, Farley, & Webster, 2000), organizational strategy (Matsuno et al., 2002; Pelham & Wilson, 1996), market dynamism and competitive hostility (Appiah-Adu & Singh, 1998), innovation and learning (Baker & Sinkula, 1999b;

⁸³ e.g. Germany (Homburg & Pflesser, 2000), the Netherlands (Langerak et al., 2004), Australia (Farrell, 2000), Spain (Lado et al., 1998)

Farrell, 2000; Noble et al., 2002; Salavou, 2002), as well as market environment, market strategy and organization structure (Pelham & Wilson, 1996).

The market orientation-performance relationship has shown to be largely robust across the variety of measurement characteristics (Kirca et al., 2005). However, some influences have been discovered. The use of subjective evaluations of performance versus the use of objective measures influence the relationship between market orientation and performance (Harris, 2001; Kirca et al., 2005), as discussed in detail in the previous section.

Culture as a moderator. Cultural research, and therefore research on cultural values, beliefs and behavioural patterns, has become increasingly important for international business (Leung et al., 2005). New ways of measuring culture have been developed, such as the SVS and the SAS. Conducting research utilizing these novel cultural theories to relate international business phenomena to cultural characteristics, has been encouraged by leading scholars (e.g. Leung et al., 2005). “The importance of culture in marketing research cannot be understated” (Cano et al., 2004, p.182). Marketing managers of multinational companies face the problem of how to increase organization-wide market orientation in order for them to perform better (Nakata & Sivakumar, 2001). Luna and Gupta (2001) add that cultural differences are particularly important to understanding market behaviour. Cultural values are also important for the interpretation and implementation of marketing concepts and therefore for market orientation (Nakata & Sivakumar, 2001). Researchers report culture’s influence on individual work behaviour, which in turn has an impact on business performance (e.g. Schein, 1985; Steers & Porter, 1991).

Conducting a meta-analytic review on studies that focused on market orientation research, Kirca et al. (2005) took a close look at the market orientation-performance link. From a cultural perspective, using Hofstede’s (2001) dimensions of national culture, the authors found that cultural differences directly influence the market orientation-performance

link. Specifically, Kirca et al. (2005) propose that there is a stronger positive association between market orientation and performance in countries that have a low score on the factor *power distance*. The same is true for countries that score low on *uncertainty avoidance*. The authors suggest that additional research should be conducted, testing the influence of Hofstede's remaining dimensions of culture on the market orientation-performance link. Cano et al. (2004) also hypothesized such an influence of collectivistic rather than individualistic cultures on the relationship between market orientation and business performance, but using a meta-analysis, they found that this particular culture-level value does not influence the relationship's strength.

A different approach to link culture and market orientation was used by Burgess and Nyajeka (2005). Focusing on the LIC Zimbabwe, the authors propose that two of Schwartz's (1994a, 1999) cultural dimensions, namely cultural *embeddedness* and *hierarchy*, which are higher in LICs, affect the links between the antecedents of market orientation and market orientation. Specifically, they found that if cultures score high on embeddedness and hierarchy, the link between the antecedents *centralization*, *formalization* and *interdepartmental conflict*, and the level of market orientation seem to be weaker. Burgess and Nyajeka (2005) encourage all research that focuses on the influence of culture on the market orientation construct and propose to make use of a more recent approach to define culture using social axioms (see Leung et al., 2002).

3 STATEMENT OF HYPOTHESES

This research examines the relations of market orientation with theorized antecedents and the moderating effects of social axioms. The context of the research is the automotive manufacturing industry in South Africa and Germany. This section presents two conceptual models of the hypothesized relations, which are motivated by drawing on the literature review presented in the previous chapter.

The first model assesses the relations of market orientation with theorized antecedents and performance consequences. These relations are well-known, have been assessed in prior research on many occasions and are not the central focus of the present research. However, assessing these relations in the present research provides important additional evidence of the important effects of market orientation on business performance in these contexts. The conceptual model that refers to these effects is summarised in *Figure 5* on the following page.

The primary focus of the present research is summarised in *Figure 6*. *This second model* assesses theorized relations of theorized antecedents with market orientation and theorized moderating influences of social axioms on these relations. The moderating effects of social axioms on the antecedents of market orientation have not been studied previously. Social axioms are hypothesized to be situationally-transcendent beliefs that are held nearly universally, affecting behaviour in predictable ways but differing in their endorsement across cultures. Consequently, national cultural level differences in the moderating effects of social axioms on market orientation are not hypothesized.

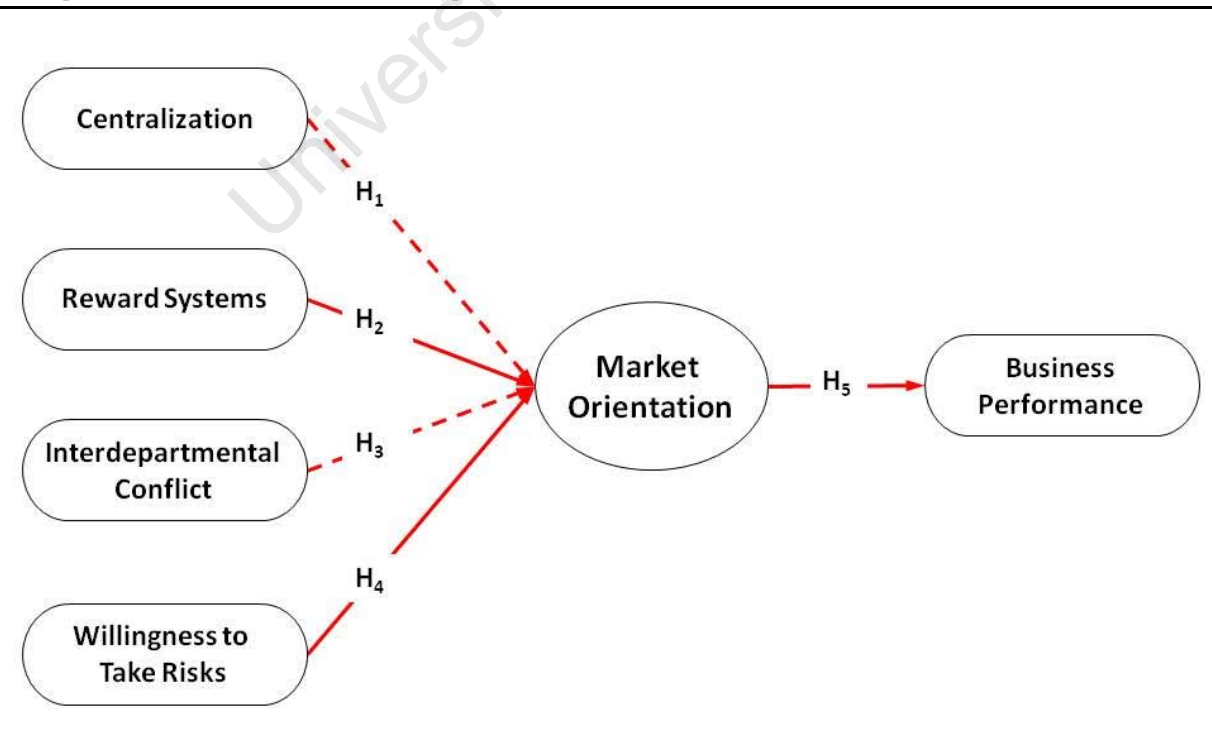
In the following chapters, these relations will be assessed systematically in a structural equation model using the latent variable partial least squares approach.

This chapter is organised in the following manner. The first conceptual model is presented and hypotheses are stated formally. Then, the second conceptual model is presented and additional hypotheses are stated formally.

3.1 Market Orientation and its Antecedents

There has been considerable research into the antecedents of market orientation (Kirca, et al., 2005). The current research examines the effects on market orientation of four antecedents that are prominent in literature: (1) centralization, (2) market-oriented reward systems, (3) interdepartmental conflict, and (4) the willingness to take risks (Jaworski & Kohli, 1993). Recently Burgess & Nyajeka (2007) motivated differences in the effects of these antecedents on market orientation. The present research relies extensively on the author’s article.

Figure 5
Conceptual Model of Structural Relations - Hypothesized Direct Effects



Note: Three performance measures are tested; see text.
Solid lines represent positive effects; dotted lines represent negative effects.

3.1.1 Centralization

Centralization refers to an organization's level of concentration of decision-making authority. It hinders intelligence-generation and dissemination (Matsuno, Mentzer, & Özsomer, 2002), as well as the responsiveness of the company, and therefore negatively affects the level of market orientation (Jaworski & Kohli, 1993). These theorized negative effects have been confirmed in Kirca et al.'s (2005) meta-analysis. Given its prominence in the market orientation literature, it is expected that *centralization* has similar negative effects on market orientation in the present research. Therefore it will be hypothesized that:

H₁: Centralization has a negative effect on the market orientation in South African and German automotive manufacturing industry firms.

3.1.2 Market-based Reward Systems

Market-oriented reward systems refer to organizational mechanisms that evaluate employee performance using market-based measures. Objective outcomes such as customer satisfaction, service speed or effectiveness of handling of customer complaints are measured and employees are rewarded accordingly (Kohli & Jaworski, 1990; Ruekert, 1992). Making use of market oriented behaviours as metrics to reward employees, market-based reward systems are instrumental in shaping employee behaviour. By motivating people's actions, market-based reward systems positively affect market orientation (Kohli & Jaworski, 1990; Ruekert, 1992) in both the HIC context, and in EMs (cf. Kirca et al., 2005; Huddleston & Good, 1999). The theorized relationship is also expected to show in the context of the present research. Thus:

H₂: Market-based reward systems have a positive effect on market orientation in South African and German automotive manufacturing industry firms.

3.1.3 Interdepartmental Conflict

Interdepartmental conflict pertains to the dynamics within the departments and refers to conflicts within the company. Whereas *centralization* negatively affects intelligence generation and dissemination, the factor *interdepartmental conflict* affects the company's market orientation by inhibiting its information flow, as well as interdepartmental cooperation (Jaworski & Kohli, 1993). It hinders communication (Ruekert & Walker, 1987) which is also negative for a market orientation (Felton, 1959; Levitt, 1969; Lusch et al., 1976), because it limits both coordination and implementation of organization-wide dissemination and response to market information (Shoham, Rose, & Kropp, 2005). This negative influence finds general acceptance in research (Kirca et al., 2005); however, cultural characteristics have been detected that might have an impact on the relationship (cf. Bhuian, 1998; Shoham & Rose, 2001; Sin et al., 2005). Given its prominence in literature the hypothesis will be tested that:

H₃: Interdepartmental conflict has a negative effect on market orientation in South African and German automotive manufacturing industry firms.

3.1.4 Willingness to Take Risks

The last factor, *willingness to take risks*, refers to top management's willingness to take risks of possible failure that is required to engage in market-oriented behaviours - for instance when introducing new products (Jaworski & Kohli, 1993). Responding to market information by changing existing strategies also comes with a certain risk of failure (Jaworski & Kohli, 1993). However, according to Rogers (1995) and Smith et al. (2005), risk-taking is closely related to innovation and the ability to create knowledge. Avoiding such risks works against innovation in the company, thus hindering a market orientation. Jaworski and Kohli (1993) proposed that risk aversion depresses market orientation by discouraging the development and implementation of strategies and the acceptance of reasonable risks.

Following the theoretical background a positive effect of risk on market orientation is expected in the present study. Therefore it is hypothesized that:

H₄: The willingness to take risks has a positive effect on market orientation in South African and German automotive manufacturing industry firms.

3.2 The Market Orientation-Business Performance Link

One reason for the importance of a market orientation originates from its hypothesized influence on business performance. The literature review revealed the multitude of research on the market orientation-performance link. The majority of prior studies report a positive link between the two constructs (see Cano et al., 2004; Deshpandé & Farley, 2004; Kirca et al., 2005). However, as previously discussed, there is a small number of studies that fail to confirm theorized relations (e.g. Appiah-Adu, 1998; Bhuian, 1997, 1998; Mavondo, 1999a; Sin et al., 2005).

Studies conducted in EMs feature prominently among studies in which theorized relations were not confirmed. However, the effects of national culture and developmental context have been inconsistent. For instance, in a meta-analysis of their marketing orientation research, Deshpandé and Farley (2004) find that the effects of market orientation on performance are highest in EMs and ascribe this to low adoption levels. Prior research that suggests national culture to affect the adoption and implementation of market orientation (Nakata & Sivakumar, 2001) provide mixed results. However, another meta-analysis finds that national culture, GDP per capita, and human development do not moderate the effects of market orientation on performance (Cano, Carrillat, & Jaramillo, 2004). Turbulence (market and technology), competitive intensity, and method of measurement (i.e. market orientation scale) also moderate the market orientation and business performance link (Kirca, Jayachandran, & Bearden, 2005).

In summary, the link between market orientation and business performance has been found consistently in prior research in many different institutional contexts. Although researchers have contended that the effect sizes should be higher in EMs than HICs, empirical evidence has not been consistently revealed. Consequently, market orientation should have a positive effect on business performance in the automotive manufacture industries. In prior market orientation research, business performance typically is measured using market share trend, profitability trends, and sales turnover. Therefore:

H_{5a}: Market orientation has a positive effect on the (a) market share trend over the last three years, (b) profitability trend over the last three years, and (c) sales turnover of South African automotive manufacturers.

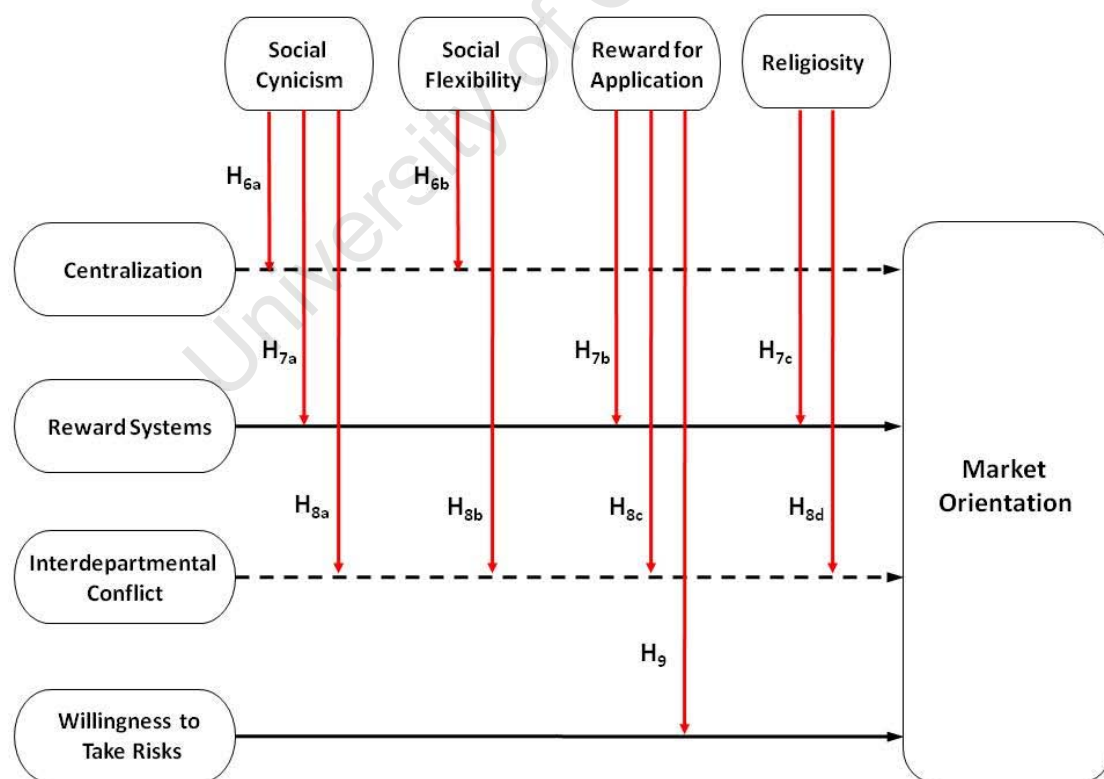
3.3 The Influence of Culture on the Market Orientation Construct

So far, only little is known about the effects of culture on business matters. Traditionally, value priorities have been used to operationalize culture. However, not all behaviour is goal-oriented (e.g. Lock & Latham, 2004) and can therefore be explained by values. In the present study, culture is operationalized using a new measure, social axioms. Based on the discussion in the literature review, social axioms are generalized expectancies about life that shape exchange relations. The concept of individual social axioms, in particular, offers a great spectrum of possible interactions with facets of organizational constructs. An individual's behaviour is shaped by general beliefs, which is not restricted to acting in private matters. The social axioms that people endorse are expected to affect their work behaviour. Therefore it is reasonable to expect that social axioms interact with the previously theorized relationships between market orientation and its antecedents. In the following, possible interaction effects of four of the social axioms (*social cynicism, social flexibility, reward for application, religiosity*) proposed by Leung et al. (2002) with the *centralization, reward systems, interdepartmental conflict*, as well as the *willingness to take*

risks within an organization, will be hypothesized and discussed. In order to pick up the hypothesized effects in the countries under investigation and to respond to within-nation heterogeneity, the social axioms are measured at the individual level.

Since the effects of social axioms on market orientation have not been studied before, there is only a small body of literature available to guide the development of the hypotheses. For a detailed discussion of the attributes of the social axiom-levels, as well as the antecedents of market orientation, see the *Cultural Context* section. The hypothesized relationships on the moderating effects of culture (depicted in *Figure 6*) draw mainly from Leung et al.'s (2002) description of the social axioms, as well as from Jaworski and Kohli (1993), Kohli and Jaworski (1990) and Ruekert's (1992) illustrations of market orientation and its antecedents.

Figure 6
Conceptual Model of Structural Relations - Hypothesized Moderation Effects



Note: Three performance measures are tested; see text.

3.3.1 Centralization

A negative view of human nature, including the belief that power leads to the exploitation of others, is characteristic of people who endorse the social axiom *social cynicism* (Leung & Bond, 2004). Social cynicism represents a biased view against some groups of people as well as a mistrust of social institutions. People high on social cynicism also think that power and status make people arrogant. Power and status are on the other hand characteristics of people working in centrally organized companies. It can be assumed that people with these beliefs do not work well in a centralized environment. Leung and Bond (2004) explain the relationship between social cynicism and a faster pace of life with the business-like, transactional approach of every individual. Highly centralized organizations, on the other hand, restrict the actionability of individuals. Also, Singelis et al. (2003) found social cynicism to be negatively related to social desirability, interpersonal trust, and cognitive flexibility. Social relations however, are a vital part of centralized organizations. Rupf and Boehnke (2002) report a positive correlation of the social axiom with hierarchic self-interest. Centralized companies possess a flat hierarchy which, depending on the person's position within the company, can put her in an undesirable position.

In concert with previous research on the antecedents of market orientation, the level of centralization in a company affects the market orientation negatively by hindering intelligence generation. The described effect is also hypothesized to be observed in the present study. Following the theorized relations between centralization and social cynicism the level of endorsement of the social axiom social cynicism should have an influence on the negative effect of centralization on market orientation. More precisely, a high endorsement of social cynicism is expected to reduce the negative relationship between centralization and market orientation. It can be hypothesized that:

H_{6a}: As social cynicism increases, the negative effect of centralization on market orientation will be less negative.

Individuals high in *social flexibility* prefer to do things in a flexible way. They think that one has to deal with matters according to the circumstances and that there is often more than one way to solve a problem (Leung & Bond, 2004). Social flexibility correlates positively with cognitive flexibility and negatively with interpersonal trust (Hubbard, et al., 2003). Therefore the social axiom stands in direct conflict with a highly centralized company, where power is unequally distributed and decisions are made by only a few people. Trust is an important attribute in an organization with a high concentration of decision-making authority. Therefore it can be assumed that people with a high endorsement of social flexibility will feel restricted in a centralized work environment and might have issues trusting their superiors. As hypothesized before, centralization has a negative effect on market orientation and social flexibility is assumed to assist this relationship. Hence:

H_{6b}: As social flexibility increases, the negative effect of centralization on market orientation will be more negative.

3.3.2 Reward Systems

Individuals high on *social cynicism* have a negative view of human nature. They think that powerful people tend to exploit others. A high level of social cynicism is not only related to a lower life satisfaction, but also to a lower satisfaction towards the company (Leung & Bond, 2004). *Market-based reward systems* however, can give them satisfaction. At first sight, individuals high on social cynicism appear to distrust the concept of reward. Believing that one is exploited by more powerful people stands in contrast to the concept of rewarding. However, market-based reward systems offer a strong incentive to work harder in order to achieve a goal, since these assure the reward is independent of the disposal of said powerful people. Lower achievement via conformity is particularly related to social cynicism,

manifesting in a low acceptance of values and visions set by leaders that ought to guide them in their goal-attainment activities (Leung & Bond, 2004). Repaying people for special input could induce them to give their best only when rewards can be expected. Social cynicism is also related to a lower level of conscientiousness (Leung & Bond, 2004), which in turn stands for a lower level of competence, order, dutifulness, discipline and aim for achievement (Thurstone, 1934). By utilizing market-based reward systems, a socially cynical person does not strive for achievement, but for reward. As hypothesized before, market-based reward systems have a positive impact on market orientation. Considering the expected link between social cynicism and reward, it can be assumed that individuals with a high endorsement of social cynicism are more strongly affected by market-based reward systems than others and therefore the social axiom moderates the reward system-market orientation relationship. Hence, it can be hypothesized:

H_{7a}: As social cynicism increases, the positive effect of market-based reward systems on market orientation will be more positive.

As theorized above, rewarding employees for objective outcomes and behaviours has proven to have positive effects on an organization's market orientation. Reward systems encourage people to think strategically and therefore work in favour of a market orientation. Individuals with a high level of the social axiom *reward for application* believe that the investment of resources leads to positive results. It is believed that hard work and effort combined with good knowledge and careful planning of the task lead to success (Leung & Bond, 2004). An environment that rewards people for their effort using objective outcomes as it is the case with market-based reward systems (Kohli & Jaworski, 1990; Ruekert, 1992), is expected to spur them to give their best and promote competition, which is believed to bring about progress. The social axiom reward for application is related to a stronger performance motive that incorporates the performance of others (Leung & Bond, 2004). This, as well as the higher agreeableness and approval of humane leadership that is characteristic for people

who endorse the social axiom (Leung & Bond, 2004), leads to the assumption that those people are more likely to endorse reward systems. A positive attitude towards such systems within an organization should lead to a higher rate of utilization. Therefore, reward for application can be hypothesized to interact with market-based reward systems which in turn are hypothesized to have a positive effect on market orientation. Summarized:

H_{7b}: As reward for application increases, the positive effect of market-based reward systems on market orientation will be more positive.

Another social axiom that is expected to interact with the positive relationship of *reward systems* on an organization's market orientation is *religiosity*. According to Solomon et al. (1991) followers of a religion find meaning and sense of shared purpose in their beliefs. Reward systems also give meaning to individual work behaviour. Reward, on the other hand, plays an important role in many religious beliefs. Believing in the concept of reward, people with a high level of religiosity are expected to commit to reward systems more strongly than others. Behaving according to norms described by their religiosity, reward systems provide them with rules that they can follow in a similar way. "The heart of religion is commitment" (Stark & Glock, 1968, p. 1). This commitment does not have to be restricted to the religion itself but can also extend to other behaviours (Mokhlis, 2006). Given the strong similarities between the endorsement of religiosity and reward, identification with market-based reward systems within an organization is likely. This in turn interacts with the positive relationship between market-based reward systems and market orientation. Therefore:

H_{7c}: As religiosity increases, the positive effect of market-based reward systems on market orientation will be more positive.

3.3.3 Interdepartmental Conflict

As reviewed before, research shows that *interdepartmental and inter-functional conflicts* within a company negatively affect market orientation. Tension between employees or departments inhibits the flow of information. Instead of interacting, people try to protect their privacy. Cross-functional cooperation is low and departments do not get along well. Conflicts are all-pervasive.

The social axiom *social cynicism* is characterised by a general mistrust in people and institutions, and people who endorse *social cynicism* have prejudices against others. They think power and status make people arrogant. Interaction is difficult, since people high in social cynicism are not likely to support their colleagues (Leung & Bond, 2004). Social cynicism is related to a low endorsement of team-oriented leadership, a higher level of disagreement within the in-group and a general lack of motivation to get along with others (Leung & Bond, 2004). While this might be the reason for conflicts, socially cynical people are not as much affected by conflict as other people are. Interaction and information flow is lower, due to their dislike of teamwork and allegiance, not because of conflicts within the team. Interdepartmental conflicts are negative for the market orientation of a company. This relationship might be destabilized by the endorsement of social cynicism. It can therefore be hypothesized that:

H_{8a}: As social cynicism increases, the negative effect of interdepartmental conflict on market orientation will be less negative.

Cultures that score high on the social axiom *social flexibility* make compromises in everyday life including in their work environment (Leung & Bond, 2004). Flexibility promotes interaction between people and leaves less space for tension. Projecting this on the professional environment, the characteristics and actions of socially flexible people could prohibit conflict. Working in harmony leads to better performance. It can be assumed that

individuals with a high level of social flexibility will try to avoid conflicts in their work environment. Interdepartmental conflict hinders information flow and cross-functional cooperation (Jaworski & Kohli, 1993). This in turn has a negative influence on an organization's market orientation. A high level of social flexibility discourages conflicts and therefore positively affects the information flow in a company. Therefore it can be assumed that:

H_{8b}: As social flexibility increases, the negative effect of interdepartmental conflict on market orientation will be less negative.

Mutual tolerance and honesty are two of the qualities important for individuals with a high endorsement of the social axiom *reward for application* (Leung & Bond, 2004). People believe that open criticism is good and harmony leads to success in the career. Modesty makes a good impression on people. The distinct beliefs of those scoring high on reward for application are important factors that help establish and maintain harmony, and therefore reduce or avoid tensions and conflicts. Singelis et al. (2003) report a positive relationship between *reward for application* and social desirability as well as with 'working hard to maintain good inter-personal relationships'. Interdepartmental conflicts are hypothesized to negatively affect market orientation. Conflict-affected environments interfere with the pursuit of harmony of people high on reward for application. Therefore, it can be assumed that interdepartmental conflicts lead to an amplification of the negative effect on market orientation. Thus:

H_{8c}: As reward for application increases, the negative effect of interdepartmental conflict on market orientation will be more negative.

According to social axiom theory, *religiosity* promotes benevolence in human interactions and social trust is attributed to religious beliefs (Berger, 1967). Hindering the information flow between individuals and departments, conflicts negatively influence the

level of market orientation. Religion correlates with McCrae's (2002) concept of agreeableness (Leung & Bond, 2004). A high level of religiosity causes individuals not only to avoid conflicts, which in itself would be advantageous for the level of market orientation, but also behave differently in the conflict situation. This is manifested by giving in and sharing knowledge, even though people do not get along well. The desire for harmony as well as a high level of moral standards leads to a more productive behaviour in conflict situations and therefore, in the context of market orientation, reduces their negative effects. Thus it can be assumed that:

H_{8d}: As religiosity increases, the negative effect of interdepartmental conflict on market orientation will be less negative.

3.3.4 Risk Attitudes

Individuals with a high endorsement of the social axiom *reward for application* believe that through effort and careful planning positive outcomes can be achieved. They try to avoid making mistakes that could lead to a negative outcome by planning in advance. Ward and Ramakrishna (2003) report a significant relationship between *reward for application* and *kiasu*, the fear of losing out. The *willingness to take risks* connected to introducing new products or other innovations in order to create knowledge in the company is hypothesized to have a positive effect on market orientation. The aversion to take such risks as it is characteristic for people high on reward for application is expected to affect behaviour in a professional environment. Occasional failures are less likely to be accepted by individuals with a high level of the social axiom reward for application, and those people will always try to assure the success of their actions. However, the willingness to take risks is an important factor for market orientation. From a psychological point of view Leung and Bond (2004) found that people who score high on reward for application rely more often on vertical

sources (superiors). This reliance on more qualified people can help to ensure the success of a risky project. Therefore the negative effects, i.e. losses through failure can be minimized without hindering the overall willingness to take risks of an organization. Hence, it can be assumed that the actions of people high on reward for application minimize the negative effect of risk attitudes and therefore positively influence the impact of the willingness to take risks on market orientation. It can be hypothesized that:

H₉: As reward for application increases, the positive effect of willingness to take risks on market orientation will be more positive.

Figure 6 summarizes the hypothesized interaction effects. Having reviewed and hypothesized the possible direct effect between the antecedents of market orientation and market orientation, as well as the interaction effects between social axioms and the construct of market orientation, one can clearly see that individual culture has a strong impact on market orientation. Some of the proposed relationships find strong support in the literature; some possess a more speculative nature. The aim of this study is to find the links that exist and develop a universal model to explain them.

4 RESEARCH METHODOLOGY

A cross-sectional research design was employed using an online survey document. This section provides details of the research methodology employed in the present study. Section 4.1 provides details on sampling. Section 4.2 provides details on the instrumentation.

4.1 Sampling

The sampling frame comprised all automotive industry manufacturers with more than 50 employees and less than 10 000 employees in Germany and South Africa. *Automotive industry manufacturers* are defined as companies involved in the design, development, and manufacture of motor vehicles or their component parts. These companies share a common ultimate goal of selling a motor vehicle, either in the domestic market or an export market. Germany and South Africa are leading motor car exporters in their region. Firms with more than 10 000 employees were excluded from the sampling frame because of the complex process required to gain permission to conduct research within German automotive manufacturers. The complexity of this process increased as the number of employees increased, making it impractical to collect data in the remaining handful of large firms. Data collection equivalence which regards the comparability of sampling frames and techniques was a major concern in this research and following the recommendations of Hult, Ketchen, Griffith, Finnegan, Conzalez-Padron, Harmancioglu, et al. (2008) data were collected with the view of maximizing data equivalence. Senior marketing executives at participating automotive industry manufacturers in both countries nominated multiple informants to participate in the study. Informants were chosen based on their ability to answer the questions competently and represent the diversity of opinions within the company. The following sections provide details of the sampling procedure employed in both countries.

4.1.1 Germany

To identify potential participants, the Verband der Automobilindustrie (VDA) was approached with a request to provide industry information and to endorse the study. VDA is the umbrella organization of the German automotive sector and they kindly agreed to endorse the study and to provide access to their extensive members list of automotive manufacturers and suppliers. This was important, because obtaining permission to conduct surveys in German automotive manufacturers can be very difficult, often requiring approval by many company stakeholders prior to agreement. In addition to the members of the VDA, a list of other German automotive companies was compiled using online sources such as the Yellow Pages, in order to avoid potential bias. By browsing the company websites, their general email addresses were identified and a short message was sent requesting details of a possible contact person for the research in the company. If no answer was received, this was followed up by a phone call. Participating companies were offered access to the results of the research, as well as an executive summary of the findings on completion of the study.

A personalized cover letter and project description was sent via email to the senior marketing executive or, where no senior marketing executive could be identified, the senior executive officer of the firm was contacted. A letter of reference (see *Document 1* in the Appendix) signed by both VDA's CEO and the head of department of *Vehicle Parts and Accessories* also was included. The personalised letter requested permission to conduct the survey in the firm. Fifteen percent of the companies contacted agreed to participate. A list of all participants can be found in *Table 30* in the Appendix.

When companies agreed to participate, the details of the questionnaire were discussed with the senior executive, who then identified multiple informants competent to respond to the survey questions. (In order to avoid bias caused by the inability of respondents to answer the questions in a qualified manner, measures were taken in form of a no-response-option to a

number of questions.) The online questionnaire had a 'drop-down box', so that informants could identify their company when responding. Between five and forty informants participated in each company, with larger companies and those with more diverse business units providing more informants. Prior to administration, approval usually had to be given by the relevant Work Council. Work Councils are a type of German employee representative body that serves a similar function to trade unions in South Africa on a firm level. The approval process then continued within each company, according to the directions of the senior executive and the Work Council. In a typical company, after permission to conduct the survey had been obtained from senior marketing management and the Works Council, it was necessary to gain the approval of other senior executive officers and other senior managers in human resources and research departments. In some cases, prior to granting permission, potential participants only approved the survey after accessing the online questionnaire content to verify that it faithfully reproduced the content of the paper version presented for approval.

As the preceding paragraphs imply, collecting data in Germany required considerable time and effort that increased as company size increased. After six months of working in the field, it became clear that transiting the approval process in large companies would take longer than a year, even with industry trade association endorsement, and that it may not result in permission to survey even then. For instance, in one large automobile manufacturer, after three months of repeated contacts, prompting, and the support of the senior marketing executive, the questionnaire still had not been approved for distribution to all of the senior executives to begin the process of consultation and approval. Moreover, it became very clear that approval could be denied without reason at any stage of the process. Consequently, after more than six months of extensive efforts to gain permission to conduct the research in some large firms, it was decided to exclude the largest firms. In effect, this meant excluding automobile producers, such as Daimler, BMW and Volkswagen.

4.1.2 South Africa

Data in South Africa were collected in a similar matter. Potential participating firms were identified using online resources and industry information. The South African NAACAM (National Association of Automotive Component & Allied Manufacturers), NAAMSA (National Association of Automobile Manufacturers South Africa) and AIEC (Automotive Export Industry Council) were initially unable to endorse the research due to a recent decision by the industry bodies to stop student research projects in the industry. Eventually, AIEC kindly endorsed the research and sent a cover letter including a description of the project to their member database of 400 South African automotive manufacturing industry firms. This was important because membership in the three associations overlaps considerably.

Potential participants were contacted using the same procedure as in Germany. A total of 95 companies with over 50 employees were chosen from the NAACAM and the NAAMSA database of members fulfilling the criteria as automotive supplier/manufacturer. In the next step, the Marketing Director (or Managing Director) from each company was identified and a project description was sent to the companies. Within two weeks, the recipients were followed-up via telephone, accumulating 60 automotive industry manufacturers, who agreed to participate in the study by forwarding the link to the questionnaire to a number of people qualified to answer the questions, ranging between 5 and 10 respondents. This equals a rate of positive responses of 67 percent. After discussing the details of the administration of the survey within the company, an email was sent containing the link to the online-questionnaire for distribution. Similar to the procedure in Germany, various progress reports and reminders were delivered via email and/or telephone. In a number of companies, problems arose regarding the reception of the emails and therefore access to the online-questionnaire, but

these were resolved after contacting their IT-departments. After a period of six weeks a total of 179 responses from 55 companies were received. See *Table 31* in the Appendix.

4.1.2.1 Research Environment

In order to develop true contingency theories it is necessary to conduct research in emerging markets and where emerging markets can be compared to high income countries clearly this reveals contingency theories better (cf. Burgess & Steenkamp, 2006). According to the *MSCI All Country World Index* by Morgan Stanley Capital International (2006), with a current estimated nominal GDP of \$492 billion (in 2008) South Africa is rated as an emerging market. Being a highly important Western high income country with a large export economy and a nominal GDP of \$3 667 trillion (in 2008) Germany represents a developed market.

The two countries share a number of industrial similarities important to the present study and therefore offer a suitable research environment. Although considerably smaller in size in South Africa, both countries share a long standing history of automotive industry which is described in detail in the literature section. South Africa and Germany are major exporters of automotive vehicles and produce components for said industry. The two industries are considerably interwoven in that a number of German automotive producers have their vehicles assembled in South Africa (e.g. Daimler, Volkswagen) and local South African companies supply parts for the German industry.

Literature suggests that for understanding marketing and culture it is advisable to combine high income countries and emerging markets in one study (Burgess & Steenkamp, 2006). One way to distinguish cultural characteristics of countries is their people's endorsement of social axioms. For the present research, South Africa and Germany fulfil the specification of being culturally distinct in terms of their cultural beliefs. In terms of the earlier described country level dimensions of social axioms, South Africa and Germany differ

in that Germany scores higher on the societal cynicism index than South Africa and has a lower score on the dynamic externality index (Bond et al., 2004).

Given the described parameters, the choice of South Africa and Germany as target countries and the automotive production industry as the sector under investigation proved to be the most likely to deliver meaningful results.

4.1.2.2 Sample Size and Selection Process

The sample size was dependent on a number of issues, which had to be weighed against each other. Determining the sample size depends on type of sample, homogeneity of population, number of subgroups, budget and time constraints, as well as on the method of data analysis. Literature suggests that for structural equation modelling, the sample size should not be less than 200 cases (Boomsma, 1982); other authors describe anything above $n=200$ as a large sample size (Kline, 2005). Based on the choice of analysis and software for the proposed model, the review of relevant literature and for feasibility reasons, a sample size of approximately 200 cases per country was decided on.

The selection method for the organizations was restricted to time and budget constraints. Only organizations that agreed *ex ante* to participate were included in the sample. The final decision whether an organization was selected for the research depended on whether the key contact was willing to administer the survey in his or her organization. All efforts were made to minimize sampling error within these constraints. To ensure that the required sample size was achieved, the number of elements sampled from each stratum was between 5 and 40 for German companies; in South Africa no limit was set for the number of participants per company, as the average company contacted there was much smaller than in Germany. The number of elements at each organization was additionally limited to this particular amount to avoid inconvenience and possible rejection on behalf of the organization. The selection of elements within each stratum was conducted on a non-probability sample, using a

convenience sampling method, where the respondent's participation was voluntary, leaving the selection of the people approached to the key-contacts in the company. Due to the employed scales and methods for analysis it was not necessary to assure that the responses per company represented proper cross-samples.

The applied methodology of sampling, as well as the sample size can be justified by the nature of the research. Due to sample selection methods and the limited sample size, the 'projectability' of the results on the whole automotive sector may not be given. This will be strongly considered in the final conclusion of the survey.

4.2 Instrumentation

4.2.1 *Questionnaire*

In this section, the questionnaire used for the field research will be described in detail. This includes the structure of the online-questionnaire, scales used, necessary adjustments and translations, the technology, cultural and technical issues, as well as the pre-testing. The questionnaire included a measure of social axioms, values, the antecedents of market orientation, a scale that determines the level of market orientation within the organization, an instrument to measure business performance, as well as demographic questions regarding the respondents. All scales used originate from highly cited research and have been documented to be reliable and valid in diverse contexts, including the present research environment. In the following, the instruments used in the survey, as well as considerations regarding the cross-cultural research methodology will be outlined. All scales are well documented in literature and have been proven to produce reliable results across various contexts.

4.2.1.1 Cross-cultural Research Considerations

When conducting research across cultures a number of methodological issues have to be considered in order to ensure unbiased results and their interpretability (cf. Hult, Ketchen, Griffith, Finnegan, Conzalez-Padron, et al., 2008). This includes the general methodology as outlined in previous sections, as well as the data-collection method with special focus on questionnaire design, choice of scales and items, as well as the wording of the questions asked.

The present study gave careful attention to these topics in order to ensure best practice cross-cultural research. Following Hult, et al. (2008), three important concepts have been considered: (1) *construct equivalence*, which stands for a given concept's or behaviour's meaning and function across cultures (Kumar, 2000), (2) *measurement equivalence*, which signifies the comparability of a scale's wording, scaling, and scoring from culture to culture (Craig & Douglas, 2000; Mullen, 1995), as well as (3) *data collection equivalence*, which regards the comparability of sampling frames and techniques when collecting data across cultures (Reynolds, Simintiras, & Diamantopoulos, 2003).

Both 'etic (i.e., universal) and 'emic (i.e. culturally specific) meanings of the measured constructs and scale items have been considered (cf. Baumgartner & Steenkamp, 1998) prior to and post data collection. Statistical assessment of construct equivalence are discussed and outlined in section 4. Three components of measurement equivalence were considered, namely calibration, translation, and metric equivalence (Craig & Douglas, 2000; Sekaran, 1983; Steenkamp & Baumgartner, 1998). Pre-tests confirmed the identical meaning of scales and wording across cultures. Where necessary, back-translation of questionnaire items has been used (Brislin, Lonner, & Thorndike, 1973). Equal sampling frames, data collection procedures, and sample comparability ensured data collection equivalence.

4.2.1.2 Structure

Although there are a few minor differences between the South African and German version of the questionnaire, the general structure is the same. Therefore, only the German questionnaire will be described in detail. Differences occurring will be mentioned.

The system used for programming and hosting the online questionnaire, *EFS Survey*, was offered by *Globalpark*, a renowned supplier of online-survey software used by over 150 universities and research facilities worldwide. Programming, testing, maintenance, as well as data screening and export were done online. The questionnaire was accessible through a link supplied to the participants via email.

The questionnaire consisted of six sections totalling 117 items (122 for South Africa). To avoid inconvenience, the text and questions on every page were designed in a way that made it unnecessary for the respondent to use the scroll function. Moving to the next page was only possible after clicking on a button labelled *NEXT* at the bottom of each page. To increase layout clarity, including reducing an overcrowded overview and relating scales and boxes to the correct answer, numbers of simultaneous questions that used the same set of response categories were formatted using either a matrix or grid.

Accessing the above-mentioned link opened an introductory page, including a brief description of the background of the study. The respondent then had to choose his/her company from an alphabetically arranged drop down list (In the South African version, two fields for *company name* and *location* were offered instead). On the same page, the respondent was then asked to indicate his/her gender. Moving to the next section, five pages including 30 items of the *social axiom scale* were displayed. Each of the pages included a brief instruction regarding how to answer the questions followed by the item itself and five answer categories, of which only one could be chosen. In the next section a filter was applied using the information on gender to direct the respondents to the gender specific version of the

portrait value questionnaire. The 21 items were distributed on three pages, each containing a brief instruction and six answer categories. The third section contained questions referring to the *antecedents of market orientation*. All 31 items on the four pages had to be answered by selecting one of the five answer categories in order to get to the next section. Section four, *market orientation*, was structured in four pages. The total number of items was 23. In addition to the five answer categories, the respondent was offered a sixth option allowing him/her to skip the item. The single page of section five contained questions regarding the *business performance* of the companies. It included four items with three answer categories, again offering an additional option in order to skip the question (Unlike the German version, in the South African questionnaire, the respondent was offered five answer categories plus the additional skip option). Another single page section was used to gather *demographic data* on the respondents. Three open-ended questions plus two (three in the South African version) questions offering a drop-down list with answer categories were displayed.

The last section was dedicated to *personal details*. Respondents were offered the possibility to enter a raffle by submitting their email address. The South African version included three more input fields asking the respondent for their contact information.

4.2.1.3 Instruments and Scales

In the following the scales used in the present research will be presented and discussed. In addition, attention is paid to special issues concerning the use of negatively worded items in the emerging market context. A complete list of the used scales and their items is presented in *table 32* in the Appendix.

Social axiom survey (SAS). The social axiom survey was developed by Leung et al. (2002) to assess general social beliefs as described in section *Cultural Context*. It was designed to measure the five cultural dimensions: social cynicism, reward for application,

social flexibility/complexity, fate control, and religiosity. The original scale consisted of 182 items representing the five cultural dimensions. In the present study, the respondents were asked to show their degree of agreement with a number of statements related to beliefs, using a given scale. Since its first development, the scale has been the subject of continuous development, verifying its validity and reliability in various research settings. Bond et al. (2004) shortened the scale for their multi-national research, leaving 60 items. Following Chen, Fok, Bond and Motsumoto (2006), Chen, Bond and Cheung (2006) and Cheung et al. (2006), this study incorporates a reduced number of items. The shorter version of the SAS consists of 30 items with the six highest-loading items from each factor in the original 60 items sample (Bond et al., 2004). The order of appearance of the items was randomized. Although the SAS did not deliver equally reliable results in all environments (e.g. in Israel, see Kurman & Ronen-Eilon, 2004), the instrument was found to be suitable for this study since it has proven to deliver reliable results in both nations under investigation. The original wording of the items was used in South Africa. For the questionnaire distributed to German companies, the revised version of Bierbrauer and Klinger's (2000) translation of the original scale items were administered. Respondents were presented with a five-point Likert scale measuring each of the 30 items ranging from strongly disbelieve (1) to strongly believe (5).

In the current research it is necessary to call attention to the fact that hypotheses are only made for four of five social axiom dimensions. While this research was in the field the originators of the social axioms scale advise users that the validity of the *fate control* measure was questionable. There were concerns about its cross national validity. However, in the current research these data are collected and reported in order to assist researchers in understanding the measurement properties of this dimension.

Portrait value questionnaire (PVQ). Measuring values has been discussed extensively by researchers, and opinions differ (Kale, Beatty, & Homer, 1986; Rokeach, 1979).

Measurement instruments range from simple rating scales (Kale et al., 1986), to comparative instruments such as ranking procedures (O'Reilly, Chatman, & Caldwell, 1991), or multi-item scales (Hofstede, 1980a), of which the latter seem to be superior in terms of validity (Hofstede, Neuijen, Ohayv, & Sanders, 1990).

Researchers measuring Schwartz's Value System with its ten value types, *benevolence*, *universalism*, *self-direction*, *stimulation*, *hedonism*, *achievement*, *power*, *security*, *conformity*, and *tradition*, typically made use of the Schwartz Value Survey (Schwartz, 1992). The SVS that presents the respondent with 57 values that they should rate as 'a guiding principle of life' on a nine-point scale, has proven its usefulness in studies across more than 70 countries. This rating requires a high level of abstract thinking since it "provides no specific life context within which to weigh one's application of values" (Batra, 1999, p.91) and is therefore only suitable for "more developed research settings" (Batra, 1999, p.91).

This study utilizes a new instrument to measure Schwartz's values (Schwartz & Bilsky, 1990) that was developed by Schwartz et al. (1997). The Portraits Value Questionnaire (PVQ) is a more suitable instrument to assess value priorities of people with a lesser education since it "is cognitively less demanding" (Batra, 1999, p.92) and usually takes a shorter amount of time to fill out than the SVS (usually less than ten minutes) (Batra, 1999).

Using self-reported similarities to fictional people who hold certain values, the PVQ indirectly measures the value importance of the respondents (Schwartz et al., 1997). Short, textual portraits describe a person (both male and female versions) to whom a certain value is important. The respondents then answer on a six-point scale, ranging from *very much like me* (1) to *not like me at all* (6), how similar they are to the described person.

The validity of this newer instrument to measure Schwartz's value types and dimensions has been tested extensively by Schwartz et al. (1997) and has been successfully

applied in different studies (e.g. Burgess, 2002; Schwartz, 2004b; Schwartz et al., 1999; Schwartz et al., 2001). Research in several countries supported the convergent and discriminant validity of Schwartz's values using the PVQ. One of the latest multi-national studies that utilizes the PVQ is *the European Social Survey (ESS)*, covering over 30 nations. For the present study the original English wording and the German translation used in the ESS was adopted.

Antecedents of market orientation. Following the literature discussion and the development of hypotheses, the antecedents of market orientation were measured using a scale developed by Jaworski and Kohli (1993). The antecedents measured, which refer to the organizational factors that enhance or impede a market orientation, can be categorized into individual, intergroup and organization-wide factors. Five of Jaworski and Kohli's (1993) original dimensions have been measured: reward systems (6 items), attitudes toward risk (6 items), interdepartmental conflict (7 items), formalization (7 items), and centralization (5 items). Respondents were presented with statements about their organization, department and management. A five-point Likert-type scale was adopted for all items in order to ask the respondents for their level of agreement with the statements. The scale ranged from *strongly disagree* (1) to *strongly agree* (5).

For the South African questionnaire, the original English wording was used for all items. For the German questionnaire, a professional translator was hired to translate the items. In order to ensure the reliability and validity of the translation, the procedure of back-translation was applied, verifying the congruence of the translation and the original regarding context.

Market orientation. In order to quantify the degree of market orientation of a company, a large variety of measurement instruments exists. For the present study, Ruekert's (1992) approach to measure market orientation was found to be most useful, since it

represents a combination of Kohli and Jaworski's (1990) and Narver and Slater's (1990) conceptualization (i.e. behavioural and philosophical-cultural elements) of the construct. Ruekert's scale is structured in three dimensions, which were described by Burgess and Nyajeka (2005) as insight (use of customer information) including 9 items, intent (development of a market oriented strategy) represented by 8 items, and interaction (execution or implementation of the strategy) that included 6 items. Respondents were presented with statements about their organization. They were asked to indicate their level of agreement with the statements on a five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). A sixth option was given to allow the respondent to skip the question, reading *Do not know/does not apply to me*. For the South African questionnaire, the original English wording was used for all items. For the German questionnaire, the same translation-back-translation method was applied as for the items of the antecedents of market orientation scale.

In terms of validity and reliability, Ruekert's scale to measure market orientation has proven to be able to deliver reliable results and has been used by researchers many times in various research settings during the last decade (e.g. Greenley, 1995a; Burgess & Nyajeka, 2005). In their study, Burgess and Nyajeka (2005) label Ruekert's (1992) scale as an ideal tool for measuring market orientation in a low income country (LIC) context and call its performance admirable.

Business performance. The choice of the method to measure business performance is controversial and well discussed in literature. After reviewing the relevant literature and carefully weighing up the pros and cons, it was decided to follow the approach to use the relative perceived-performance measures to measure business performance adopting and adapting the quasi-perceptive measurement discussed in section *Organizational Context*.

The selection of the used variables was carried out taking into account their frequency of use in previous research. Following Golden's (1992) and Porter's (1991) original approach,

the respondents were asked to compare their business with their largest competitor using a five-point scale. Hooley et al. (2000) call this 'comparing like with like', and say that it is in many ways the most useful measure available. The scale was based on the PIMS study measure that has subsequently been applied by several researchers and successfully validated (Farley, 2004). The five-point scale was chosen, following Hooley et al. (1999, p.268) who found that "respondents could only reliably rate performance across the four criteria on relatively simple scales". Respondents were asked to rate their company regarding the measures of performance on a scale ranging from *went down a lot (1)* to *went up a lot (5)*.

Following Moorman and Rust (1999), all measures were at the organizational level. Respondents of organizations with only one SBU were asked to focus on the overall firm as the unit of analysis, as opposed to companies with multiple SBUs, where respondents should focus only on their SBU as the subject of rating.

Demographics. Demographic questions included information about the company the respondent was working for and about the respondent him or herself, beginning with the respondent's gender. It was necessary to include these questions at such an early stage of the questionnaire due to the difference in wording (male/female) in some of the items. The first set of questions was developed to identify the respondent's position within the company in order to recognize him/her as a key informant for the business performance questions. The three open-ended items included the principal activity/product/service of the respondent's work unit, his/her *job title* and the *position of his/her superior*. The next item referred to the respondent's managerial responsibilities, offering a drop down list from which he/she could choose the number of subordinates. The five answer categories ranged from *none (1)* to *>100*. In the next section, respondents were asked to indicate age using a drop-down list including 5 categories ranging from *less than 30 years (1)* to *over 60 years (5)*. In order to learn about the respondent's cultural background, the South African version of the questionnaire included

another item asking the respondent to indicate the language spoken at home. South Africa has eleven official languages, each of which was listed in a drop-down list. Additionally, the respondent could choose the option *other* and type his/her language in the destined field.

Negatively Worded Items. Several researchers recently have pointed out that negatively worded items are often problematic in emerging markets (e.g. Baumgartner & Steenkamp, 2001; Burgess & Steenkamp, 2006; De Jong, Steenkamp, & Fox, 2007; De Jong, Steenkamp, Fox, & Baumgartner, 2008; Steenkamp & Burgess, 2002; Wong, Rindfleisch, & Burroughs, 2003). As Burgess & Steenkamp (2006) point out, the reason for this phenomenon is not clear, but it is worrisome as item reversal is an effective way to neutralize acquiescence bias. Moreover, the problem is not always observed. In order to faithfully reproduce scales in the current research, negatively worded items were included in the questionnaire and administered in both countries. During analysis measurement invariance of these items was a particular consideration and will be discussed later in the data analysis.

4.2.1.4 Testing and Research Ethics

Even though the choice of scales is exclusively comprised of well established and well documented instruments, the fact that they have mainly been developed in the high income country USA demands proper pretesting. During the process of designing and structuring the questionnaire, attention was given to potential sources of respondent's bias (cf. Podsakoff & Organ, 1986; Salancik & Pfeffer, 1977). Precautions were taken to avoid consistency effects caused by respondents answering questions consistently. Therefore, questions included in each section were presented in no particular order. As the adjusted scales allowed it, the wording of items of different sections was non-uniform. The nature of the relationships under investigation was not obvious to the respondents, thus avoiding over-justification effects. In addition, the types of scales, as well as the number of scale items, varied between the different sections of the questionnaire in order to minimize common response bias. Other types of

response bias (e.g. Brislin, 1986; van de Vijver & Leung, 1997) were reduced by offering the respondent to answer 'don't know or doesn't apply to me' for some of the questions.

In case of a 'borrowed' instrument, i.e. if the scale was developed and validated in another country or context, it is crucial that it does not differ regarding characteristics likely to affect the construct. To ensure this, all scales and items were examined *a priori* regarding three levels of equivalence identified by van de Vijver and Leung (1997). (1) *Construct equivalence*, which refers to the same meaning of the construct across countries and contexts, (2) *measurement unit equivalence*, referring to the actual units and their correct conversion to the other country's standard, and (3) *scalar equivalence*, which ensures the meaning and interpretation of the response items of a scale in different research environments to be the same.

Pretest. Both versions of the questionnaire were tested through personal interviews with an industry expert, academics working in the relevant field, English and German language experts, and a media design professional. As a result, a number of changes regarding the presentation of the questions and the wording of some translated items were made. The questionnaire was then piloted with people from within the sampling frame. The results showed that the handling of the online questionnaire was easy and that respondents understood what the questions were referring to. This includes both 'etic and 'emic meanings of the measured constructs. Consequently the conclusion was drawn that the statements had face validity and would be good measures with desirable construct validity properties across cultures. During this process, the average time to complete the questionnaire was derived (15-18 minutes).

Prior to the fielding of the questionnaire, *ethical clearance for research* was solicited from the *Graduate School of Business (GSB) of the University of Cape Town's Ethics in Research Committee*. Organizational permission was obtained individually from each

participating company. Obtaining individual consent from the participants was not deemed necessary, since the participation was voluntary and in form of an anonymous survey questionnaire. Respondents are not identifiable since the nature of the survey is anonymous, assuring confidentiality of data. Where contact details are provided, these do not appear in the final report to the companies. Data security is ensured by *Globalpark's General Business Terms and Conditions*.

University of Cape Town

4.3 Data Analysis

4.3.1 Assessment of Scale Properties

4.3.1.1 Preparatory Work

After the completion of the field phase, both the German and the South African raw data set were exported into a spreadsheet. All data screening, manipulation, as well as preliminary univariate statistical analyses were executed using MS-Excel.

The first step in preparing the data for analysis was to label the variables in a meaningful way, recognized by the various statistical software packages (SPSS, STATISTICA, LISREL, SmartPLS). Where necessary, reversely coded items were re-coded. In some cases, the complete measurement scales were reversed in order to make high and low scores more conveniently interpretable. In order to exclude respondents who were not qualified to answer company specific questions, the *do not know/does not apply to me* option on the MO and BP scales was coded as non-response. In order to simplify data screening, cases were sorted using the company name as a criterion.

Data screening. Two types of respondents were dropped from the study prior to analysis. Firstly, the nature of the online questionnaire did not allow for non-responses in the SAS and PVQ scales. Therefore, incomplete cases indicated the abortion of the survey by the respondent and were removed. Secondly, following an approach proposed by Schwartz (1992) (cf. Steenkamp & Burgess, 2002), the circular structure of the Schwartz value dimensions was used to locate respondents which failed to respond to the survey in a meaningful way (misunderstanding of items, carelessness in response style). The rationale underlying Schwartz's (1992) procedure is that respondents who have answered in the pattern above must endorse values priorities that are in direct opposition. The PVQ has been used to identify said cases and respondents who used the same response for 16 or more of the 29 items were

considered to be careless and dropped. Compared to other studies (e.g. Steenkamp & Burgess, 2002) both samples performed considerably better than average. Only four South African cases (2 percent) and two German cases (1 percent) needed to be removed. The same criterion was applied to the AoMo scale, identifying cases with 27 or more identical responses. This led to the exclusion of another two cases (1 percent) from the German data set.

It was assumed that data was *missing completely at random* (MCAR) (see Rubin, 1976). As the list-wise deletion approach (see Brown, 1983) uses only complete records, it severely reduces the sample size and can lead to biased results, which has to be kept in mind (see Little & Rubin, 1987). Since respondent's positions within the participating companies were scattered over different departments/positions, it was expected that not all items of the MO scale were meaningful to each of them. A small number of respondents made use of the *do not know/does not apply to me* option. Because of the data's deviation from the standard normal distribution, following McKnight, Sidani and Figueredo (2007), missing data was substituted by the median. This was done separately for each of the three dimensions *insight*, *intent*, and *interaction* (see also Roth & Switzer, 1995; Duffy, 2000). Four cases from the South African sample (2 percent) and three German cases (2 percent) had to be removed from the analysis due to complete non-response to the MO scale.

Data on BP has been prepared in different ways for the South African and German data sets. Most South African respondents held a senior or management position, enabling them to answer the performance questions reliably. In order to make the results from both countries comparable, the means of the South African responses to the separate BP questions were calculated on a company level, and used for all respondents of that company. In so doing, the advantages of multiple informants could be used. In order to gain permission to collect individual data in Germany, it was necessary to agree to accept archival data on business performance for the entire firm given by a key informant. Because individuals were

attached to business units inside the companies this did not ensure that the archival data for the entire firm represented the financial performance of their business unit. For convenience, the questionnaire was not changed and all the respondents could answer the performance questions. However, key information was located in the dataset using the information on the informant's department/position/superior in the company. In South Africa respondents reported on the business performance information of their own business units. Consequently, the link between market orientation and business performance is assessed only for the South African sample.

In summary, eight cases in the South African data set and seven German cases were dropped due to careless response style or incompleteness, leaving 171 (95.5 percent) usable cases for South Africa and 190 (96.4 percent) cases for Germany.

4.3.1.2 Data Analysis – CFA

In order to assess the measurement properties of the scales, confirmatory factor analyses were run on the social axiom scale, the antecedents of market orientation scales as well as on the market orientation and business performance scales, following the approach of Anderson & Gerbin (1998). Analyses were performed on the variance-covariance matrix using maximum likelihood estimation computed by LISREL version 8.8. Validating the measurement of the PVQ followed a different approach. Due to the circumplex structure of Schwartz's value types, facet theory has been applied to the scale, and smallest space analyses (SSA) have been performed using *STATISTICA 8.0* in order to identify possible outliers amongst the items (cf. Bilsky, 2003; Guttman & Greenbaum, 1998; Levy, 1985; Borg & Shye, 1993). The results of the configural verification approach will be discussed in a separate section. Univariate statistics of the baseline model including all scales and items are reported in *Table 15*. The results of the CFAs are reported in *Tables 16-20*. The following section will discuss these results.

Given the hypothesized theoretical model under investigation and the assumptions made regarding variable characteristics (for instance their level of measurement and their distribution), as well as the available sample sizes, the following literature helped to make a well informed, appropriate choice of the estimation method for this study.

Of all SEM estimators, Maximum Likelihood (ML) estimation has received great acceptance amongst researchers and using other estimators requires explicit justification (Hoyle, 2000). When using ML, a number of assumptions are required. One important issue in SEM is the distribution of data (Olsson, Foss, Troye, & Howell, 2000). Although the use of ML assumes multivariate normality (Satorra, 1990), applied researchers often estimate data that clearly violates this assumption, since sample sizes are rarely sufficient for distribution-free estimators (Nevitt & Hancock, 2001). Provided the sample size is reasonably large ($N > 100$), ML parameter estimates are robust against moderate violations of the multivariate normality assumption (Boomsma, 1982; Gerbing & Anderson, 1985; Bollen, 1989; Coenders, Satorra, & Saris, 1997; Jöreskog & Sörbom, 1988; Finch, West, & MacKinnon, 1997; Hau & Marsh, 2004; Muthén & Kaplan, 1985; Sharma, Durvasula, & Dillon, 1989). In fact, Andreassen, Lorentzen and Olsson (2006) found that most studies they checked did not even acknowledge the normal theory assumptions of their applied SEM estimation method.

When using non-normally distributed data, weighted least squares (WLS) is sometimes the recommended estimator. However, Olsson et al. (2000) studied different estimation methods and found WLS under no conditions preferable to ML in terms of parameter bias and fit, and Yuan & Bentler (1997) found ML to be less biased than asymptotic distribution-free (ADF) estimators for different distributions. Another argument against the use of WLS is that the method requires sample sizes of $N > 5\,000$ for complex models to show reliable results (Hu, Benteler, & Kano, 1992). The present research follows the procedure recommended by Kline (2005, p. 48/49) to assess multivariate normality:

“The most widely used estimation methods assume multivariate normality, which means that (1) all the univariate distributions are normal, (2) the joint distribution of any pair of the variables bivariate normal, and (3) all by various scatterplots are linear and homoscedastic. Because it is often impractical to examine all joint frequency distributions, it can be difficult to assess all aspects of multivariate normality. Fortunately, many instances of multivariate nonnormality are detectable through inspection of univariate distributions. Deletion of cases that are outliers may also contribute to multivariate normality.”

Data Preparation for CFAs. As a preliminary part of the CFA, data were inspected for compatibility with the assumptions of SEM. Multivariate normality is one of the assumptions of ML estimation in covariance structure modelling. However, moderate abuses of the multivariate normality assumption do not seem to affect the estimates (Steenkam & Van Trijp, 1991). Multivariate normality conditions were assessed by the different degrees of skewness and kurtosis of the observed data. Lei & Lomax (2005) categorize the absolute values of skewness into (1) slight non-normality (<1.0), (2) moderate non-normality ($1.0-2.3$), and (3) severe non-normality (>2.3). As a general rule of thumb, unless the skewness value for any item is greater than $|2.0|$ or kurtosis is greater than $|7.0|$, the item is not seriously non-normally distributed (Fabrigar, Wegener, MacCallum, & Strahan, 1999).

Values for skewness were examined as part of a data screen process to check the distribution of scores, and for the German data were all less than $|1.7|$ (South African data: $<|1.6|$). Kurtosis in the German data was less than $|2.9|$ for all but three variables (South African data: $<|4.8|$ for all but three). Considering this rule, no items were found to be extremely non-normally distributed. For the German raw data, the coefficient of relative multivariate kurtosis was 0.993 (South African data: 1.003), indicating that the assumption of multivariate normality is tenable (cf. Baumgartner & Steenkamp, 1996). These results that are well within the guidelines, indicated there were no serious deviations from multivariate normality. It also verified the appropriateness of ML estimation used in this study (Bandalos, Finney, & Geske, 2003). Another assumption of estimators such as ML is the measurement of indicators on a continuous scale (Jöreskog, 1994).

Table 15Some Measurement Properties of Scales: Baseline Model With All Items^e

		No. of Items	Germany ^a					South Africa ^b						
			Coeff. alpha	Mode	Med.	Mean	Var.	Std.Dev.	Coeff. alpha	Mode	Med.	Mean	Var.	Std.Dev.
SAS	Social Cynicism	6	0.642	4.00	4.00	3.30	1.53	1.24	0.647	2.00	2.00	2.80	1.34	1.16
	Reward for Application	6	0.598	4.00	4.00	3.86	1.16	1.08	0.572	4.00	4.00	4.04	0.91	0.95
	Social Flexibility	6	0.481	5.00	5.00	4.40	0.58	0.76	0.489	4.00	4.00	4.05	0.69	0.83
	<i>Fate Control^c</i>	6	0.452	4.00	3.00	2.82	1.84	1.36	0.558	2.00	2.00	2.62	1.45	1.21
	Religiosity	6	0.804	4.00	3.00	3.15	1.71	1.31	0.834	4.00	4.00	3.58	1.41	1.19
	Total Scale	30												
AoMo	Centralization	5	0.781	2.00	2.00	2.44	1.10	1.05	0.827	2.00	2.00	2.41	1.18	1.08
	Reward Systems	6	0.491	3.00	3.00	2.79	0.91	0.95	0.565	4.00	3.00	2.96	1.23	1.11
	Formalization	7	0.513	4.00	3.00	3.05	1.39	1.18	0.628	4.00	4.00	3.08	1.36	1.17
	Interdepartmental Conflict	7	0.645	2.00	2.00	2.65	0.91	0.96	0.827	2.00	2.00	2.60	1.11	1.06
	Willingness to take Risks	6	0.465	3.00	3.00	2.81	0.90	0.95	0.587	2.00	3.00	2.91	1.15	1.07
	Total Scale	31												
MO	Insight	9	0.812	4.00	4.00	3.87	0.61	0.78	0.856	4.00	4.00	3.99	0.75	0.87
	Intent	8	0.750	4.00	4.00	3.64	0.94	0.97	0.710	4.00	4.00	3.53	1.28	1.13
	Interaction	6	0.805	4.00	4.00	3.69	0.70	0.84	0.828	4.00	4.00	3.80	0.83	0.91
	1-factor summated scale	23	0.901	4.00	4.00	3.73	0.78	0.87	0.918	4.00	4.00	3.77	0.96	0.97
PVQ	Power	2	^d	4.00	3.00	3.38	1.64	1.28	^d	3.00	4.00	3.59	1.41	1.19
	Achievement	2	^d	5.00	4.00	4.16	1.57	1.25	^d	5.00	4.00	3.76	1.60	1.26
	Hedonism	2	^d	4.00	4.00	4.08	1.72	1.31	^d	4.00	4.00	3.83	1.71	1.31
	Stimulation	2	^d	4.00	4.00	3.54	2.09	1.45	^d	4.00	4.00	4.01	1.75	1.32
	Self Direction	2	^d	5.00	5.00	4.71	1.33	1.15	^d	5.00	4.00	4.22	1.80	1.34
	Universalism	3	^d	5.00	5.00	4.71	0.95	0.98	^d	5.00	5.00	4.74	1.42	1.19
	Benevolence	2	^d	5.00	5.00	5.07	0.81	0.90	^d	5.00	5.00	4.92	1.10	1.05
	Tradition	2	^d	5.00	4.00	3.71	1.86	1.30	^d	5.00	5.00	4.61	1.55	1.25
	Conformity	2	^d	4.00	4.00	3.55	1.87	1.37	^d	5.00	5.00	4.35	1.80	1.34
	Security	2	^d	4.00	4.00	3.99	1.71	1.31	^d	6.00	5.00	4.29	1.99	1.41

^aN=190; ^bN=171; ^cFate Control is not used in the current research. Results are reported to assist in the development of the scale (see text)^dNot relevant to this scale because items are conceptualized to have circular relations; ^eFinal scale measurement properties in Tables 18/19

In social and behavioural science however, constructs that are theoretically continuous are typically measured using polychotomous scales (Hoyle, 2000) Bollen & Barb (1981) refer to these indicators as being coarsely categorized. According to Tepper & Hoyle (1996) and Bollen & Barb (1981) standard estimators such as ML still perform well, given that indicators are measured in five or more categories. This is the case for all scales included in the present CFAs.

Recommendations regarding sample sizes for SEM vary a lot. Determination of sample size should consider the complexity of the proposed models (Tanaka, 1987; cf. Marsh & Hau, 1991). Following Hoyle (2000), an N of about 200 is advisable if models show a minimum of complexity and $N > 400$ is preferable because of the asymptotic properties of certain fit indices (Hu et al., 1992). MacCallum, Roznowski and Necowitz (1992) even suggest sample sizes of at least 800 if modification indexes are used as a basis for re-specifying models. The present study uses sample sizes of $N=190$ for Germany and $N=171$ for South Africa.

4.3.1.3 Re-specification of Scales

CFAs for the SAS, AoMo and MO were conducted, incorporating all factors and all items. However, the initial model fit was not adequate for either the German or the South African data. Fit indexes are reported in *Table 16*. As suggested by Hoyle (2000), cautious, well-informed re-specification of theory-relevant CFA models may provide insight into the performance of specific indicators (cf. Jöreskog, 1993). The main goal of the re-specification process was to find a model that fit both datasets adequately so that testing of the hypothesized structural paths could be compared across the two nations.

Social axiom scale. As predicted by literature, not all of the social axiom dimensions perform well in cross-national environments. Reliabilities for *fate control*, a cognitive coping

response to varying levels of negative outcomes (Bond et al., 2004), has frequently been reported to be low (e.g. Klinger et al., 2004; Leung et al., 2007; Leung et al., 2002) and Leung and Bond (2004) labelled the factor as problematic. *Fate control* has been included in the present study, however it is not surprising that the factor did not perform well in either the South African or the German sample, and was therefore removed prior to further analyses.

Next, the items of the remaining factors were investigated in more detail. A number of items showed low factor loadings and insignificant t-values. Two items in the scale, “*There is usually only one way to solve a problem.*” (SF4) and “*Religion makes people escape from reality.*” (SP6), were reversely coded. Although item reversal can neutralize acquiescence bias (Baumgartner & Steenkamp, 2001), several studies found negatively worded items problematic in the EM environment (e.g. Steenkamp & Burgess, 2002; Wong, Rindfleisch, & Burroughs, 2003). This effect has also been witnessed in the SAS scale used in the present study. Therefore the two negatively worded items have been dropped.

The three items “*Significant achievement requires one to show no concern for the means needed for that achievement.*” (SC4), “*Adversity can be overcome by effort.*” (RA2), as well as “*There are phenomena in the world that cannot be explained by science.*” (SF6), also showed low factor loadings and insignificant t-values. Subsequent to the development and implementation of the present study, the authors of the original scale (Bond, Leung, Au, Tong, Chemonges-Nielson, 2004) removed item (SC4) from the latest version of the SAS (25 item Social Axiom scale, questionnaire v. 6.0), due to its unsatisfactory performance in other contexts. Items (RA2) and (SF6) showed cross-correlations with other factors in the original Social Axiom Study (Leung & Bond, 2004). They also did not perform well in the present study and were therefore dropped.

Table 16

Summary of confirmatory factor analysis; fit indices for baseline and revised models

			Fit Indices ^a									
Country	Factors dropped	Items dropped	χ^2	df	χ^2/df	p	$RMSEA$	$ECVI$	$ECVI$ 90%	CFI	$NNFI$ (TLI)	
Germany	Baseline model	-	7319	3337	2.19	0.0000	0.084	43.45	42.11	44.83	0.60	0.58
South Africa			7403	3337	2.22	0.0000	0.093	51.35	49.80	52.94	0.70	0.69
Germany	FC, FORM ^b	-	4154	2378	1.75	0.0000	0.057	22.12	21.24	23.03	0.79	0.78
South Africa			3784	2378	1.59	0.0000	0.052	22.40	21.50	23.34	0.88	0.88
Germany	FC, FORM ^{cd}	SC4, RA2, SF4, SF6, SP6, REW4, REW5, REW6, INT4, RISK3, INS5, INS6,INS7, INTE7	2226	1341	1.66	0.0000	0.053	12.45	11.82	13.12	0.85	0.84
South Africa			1994	1341	1.49	0.0000	0.047	12.50	11.86	13.18	0.92	0.91

^a Loading of 1st item of each factor fixed to 1.0; all factors allowed to correlate; factor-variances fixed to 1.0

^b MO scale: 3-factor solution

^c SAS scale: 4 factor solution, AoMo scale: 4 factor solution, MO scale: 1-factor solution

^d SAS scale 19 items, AoMo scale: 19 items, MO scale: 16 items

Looking at the description of the social axioms, the poor performance of above mentioned items find some explanation. *Social cynicism's* item (SC4) seems to deviate from the meaning of the other items in that it refers to general means needed for achievement as opposed to addressing the people themselves. The same deviation is true for *social complexity* where item (SF6) could also be interpreted as tapping into the spiritual domain and therefore does not represent a clear measure of the dimension. In contrast to the other items of *reward for application*, item (RA2) refers to a specific circumstance, namely *adversity*, while all other items do not give attention to particular nature of the situation. This could be the reason for the item's unfavourable performance. Therefore, removing above listed items does not compromise the measurement of the content of the relevant sub-dimensions.

Shortening scales and dropping the lowest loading items seems to be common practice provided that dropping the item does not compromise the measurement properties of the scale (e.g. Steenkamp & van Trijp, 1991; Baumgartner & Steenkamp, 1996). Items will be often unreliable across cultures and need to be excluded from the analysis. An important item for consideration are the factor loadings. While there is no firm guideline, Briggs and MacCallum (2003) suggest to consider items with loadings as low as 0.2. As suggested by Baumgartner and Steenkamp (1996) the lowest loading items (insignificant t-values) in the present scale were eliminated (cf. Ruekert & Churchill, 1984). All but five factor loadings of the SAS scale (Germany: four items) were significant at the 0.001 level. Even though those five (four) factor loadings were quite low, items were kept in the scale since their contribution to explain the scale has still been found valuable (see *Tables 17-19*).

Test of Reliability. The reliability of the scales used in the present research is a major concern. Low coefficient alphas are acceptable when new constructs are used and when scales are employed in emergent markets. The present study reports much more rigorous assessments of the measurement properties of the scales, confirming factorial invariance,

convergent validity, and discriminant validity. Burgess & Steenkamp (2006, p. 348/349)

summarize the current development in contemporary literature as following:

“Learning can occur at several levels. At the most basic level, we learn something about the phenomenon at hand in the country in question. In our discipline, there is a strong focus on statistical significance. Findings that are significant at $p < .05$ are considered important while findings with a significance level above $.05$ – or, more liberally, above $.10$ – are not. Similarly, scales are considered to demonstrate internal reliability when coefficient alpha exceeds $.70$. Generally, these are reasonable conventions in well-researched, Western contexts. In fact, one could argue that traditional significance testing against a null result makes little sense if previous research has established that the effect is different from zero (Farley & Lehmann, 1994). However, there are several reasons why traditional significance levels are of more doubtful value in EMs. First, since we do not know much about marketing phenomena in an EM context, in a Bayesian spirit, any information lifts marketing science above relative ignorance. Traditional significance testing minimizes the probability of erroneously concluding that there is an effect. This ignores the scientific and managerial “costs” of overlooking effects that are in reality present (Type-II error). Second, the power to detect effects generally (although not invariably) is affected adversely by lower reliability and within-country heterogeneity, both of which are especially pertinent in EMs. Hence, it is reasonable to accept more liberal significance criteria when conducting research in EMs (e.g., $p < .20$). After all, conventions are just that and our goal must be to advance science. This recommendation is similar in spirit to Lodish et al.’s (1995) use of $p < .20$ for managerially relevant decisions and to Nunnally’s (1978) suggestion to accept lower reliabilities in the early stages of research than in later research stages. Perhaps it was also in this spirit that Deshpandé and Farley (1999, p. 10) defended the low reliability of their measures in a Vietnamese study “... reliabilities of the scale measurement in Vietnam, while directionally correct, were weaker than in Japan.””

Notwithstanding that low alpha reliabilities are an indication that error variance may be undesirably high, it is important to remember that no firm guideline for acceptable values exists for Cronbach’s coefficient alpha. Coefficient alpha does not provide adequate information to assess unidimensionality and has many limitations (Cortina, 1993; Cronbach, 1951, 2004; Green, Lissitz, & Mulaik, 1977; Miller, 1995; Shevlin, Miles, Davis, & Walter, 2000) In fact, in his final paper Cronbach (Cronbach & Shavelson, 2004, p. 414) observed that “The choice of a single statistic to summarize the accuracy of an instrument is not the best report that can be made.”

Table 17Finding from Confirmatory Factor Analysis^a – Revised Scales

Scale/ Item	Germany										South Africa									
	SC	RA	SF	SP	CENT	REW	CONF	RISK	MO	SC	RA	SF	SP	CENT	REW	CONF	RISK	MO		
Social Axiom Scale																				
SC1	.27									.67										
SC2	.39									.63										
SC3	.71									.53										
SC5	.86									.45										
SC6	.34									.31										
RA1		.42									.24									
RA3		.29									.63									
RA4		.51									.46									
RA5		.61									.60									
RA6		.21									.30									
SF1			.20									.53								
SF2			.44									.52								
SF3			.38									.28								
SF5			.68									.53								
SP1				.76									.78							
SP2				.68									.70							
SP3				.82									.77							
SP4				.60									.53							
SP5				.54									.68							
Antecedents of Market Orientation Scale																				
CENT1					.46									.49						
CENT2					.51									.72						
CENT3					.59									.76						
CENT4					.85									.76						
CENT5					.81									.77						
REW1						.55									.61					
REW2						.20									.31					
REW3						.56									.73					
CONF1							.54									.80				
CONF2							.64									.77				
CONF3							.47									.78				
CONF5							.62									.70				
CONF6							.40									.28				
CONF7							.47									.60				
RISK1								.31									.50			
RISK2								.27									.17			
RISK4								.45									.43			
RIS5K								.37									.25			
RISK6								.65									.62			
Market Orientation Scale																				
INS1									.63									.73		
INS2									.60									.71		
INS3									.59									.68		
INS4									.62									.62		
INS8									.43									.47		
INS9									.63									.65		
INTE1									.57									.59		
INTE2									.60									.53		
INTE6									.59									.65		
INTE8									.55									.59		
INTER1									.60									.80		
INTER2									.59									.70		
INTER3									.60									.63		
INTER4									.48									.60		
INTER5									.50									.45		
INTER6									.59									.75		

^aCompletely Standardized Solution

In summary, five items (16 percent) of the SAS scale were dropped, significantly enhancing the overall model fit as expressed by the fit indices reported in *Table 16*.

Table 18

German Data

Confirmatory Factor Analysis – Social Axiom Scale

	SC			RA			SF			SP		
	SE	t^a		SE	t^a		SE	t^a		SE	t^a	
SC1	1.00											
SC2	1.36	0.47	2.92									
SC3	2.75	0.82	3.37									
SC5	3.13	0.93	3.35									
SC6	1.40	0.51	2.77									
RA1				1.00								
RA3				1.21	0.46	2.65*						
RA4				2.32	0.64	3.64						
RA5				2.24	0.59	3.81						
RA6				0.84	0.40	2.08**						
SF1							1.00					
SF2							1.67	0.87	1.91***			
SF3							1.82	0.98	1.86***			
SF5							2.92	1.53	1.90***			
SP1										1.00		
SP2										0.91	0.10	8.73
SP3										1.09	0.11	10.1
SP4										0.90	0.12	7.67
SP5										0.72	0.10	6.87

^a If not indicated otherwise, all factor loadings significant at <0.001 level.* $p < 0.01$; ** $p < 0.05$; *** $p < 0.1$; (two-tailed)**Table 18** (continued)

German Data

Confirmatory Factor Analysis – Antecedents of Market Orientation Scale

	CENT			REW			CONF			RISK		
	SE	t^a		SE	t^a		SE	t^a		SE	t^a	
CENT1	1.00											
CENT2	1.14	0.23	4.94									
CENT3	1.34	0.25	5.35									
CENT4	1.67	0.27	6.14									
CENT5	1.54	0.25	6.09									
REW1				1.00								
REW2				0.44	0.18	2.42**						
REW3				1.05	0.19	5.59						
CONF1							1.00					
CONF2							1.20	0.21	5.77			
CONF3							0.77	0.16	4.75			
CONF5							1.25	0.22	5.70			
CONF6							0.69	0.16	4.26			
CONF7							0.85	0.18	4.78			
RISK1										1.00		
RISK2										0.91	0.39	2.31**
RISK4										1.39	0.47	2.93*
RISK5										1.29	0.47	2.73*
RISK6										2.11	0.67	3.16*

^a If not indicated otherwise, all factor loadings significant at <0.001 level.* $p < 0.01$; ** $p < 0.05$; *** $p < 0.1$; (two-tailed)

Table 18 (continued)

German Data

Confirmatory Factor Analysis – Market Orientation Scale

	MO	
	<i>SE</i>	<i>t</i> ^a
INS1	1.00	
INS2	1.10	0.15 7.16
INS3	1.14	0.16 7.07
INS4	1.00	0.14 7.30
INS8	0.65	0.12 5.32
INS9	1.05	0.14 7.47
INTE1	1.19	0.18 6.79
INTE2	1.54	0.22 7.13
INTE6	1.20	0.17 7.07
INTE8	1.09	0.16 6.62
INTER1	1.34	0.19 7.10
INTER2	1.10	0.16 7.01
INTER3	1.04	0.15 7.10
INTER4	0.85	0.14 5.91
INTER5	0.88	0.15 6.05
INTER6	1.28	0.18 6.99

^a If not indicated otherwise, all factor loadings significant at <0.001 level.* $p < 0.01$; ** $p < 0.05$; *** $p < 0.1$; (two-tailed)**Table 19**

South African Data

Confirmatory Factor Analysis – Social Axiom Scale

	SC		RA		SF		SP	
	<i>SE</i>	<i>t</i> ^a	<i>SE</i>	<i>t</i> ^a	<i>SE</i>	<i>t</i> ^a	<i>SE</i>	<i>t</i> ^a
SC1	1.00							
SC2	0.94	0.17 5.58						
SC3	0.82	0.16 5.04						
SC5	0.50	0.11 4.45						
SC6	0.43	0.13 3.30						
RA1			1.00					
RA3			1.95	0.78 2.48**				
RA4			2.10	0.89 2.36**				
RA5			2.19	0.89 2.47**				
RA6			1.32	0.64 2.06**				
SF1					1.00			
SF2					0.65	0.18 3.54		
SF3					0.32	0.13 2.46**		
SF5					0.59	0.17 3.54		
SP1							1.00	
SP2							0.91	0.10 8.69
SP3							0.97	0.10 9.52
SP4							0.67	0.10 6.55
SP5							0.86	0.10 8.44

^a If not indicated otherwise, all factor loadings significant at <0.001 level.* $p < 0.01$; ** $p < 0.05$; *** $p < 0.1$; (two-tailed)

Table 19 (continued)

South African Data

Confirmatory Factor Analysis – Antecedents of Market Orientation Scale

	CENT		REW		CONF		RISK		
	SE	t ^a	SE	t ^a	SE	t ^a	SE	t ^a	
CENT1	1.00								
CENT2	1.29	0.22	5.89						
CENT3	1.41	0.23	6.04						
CENT4	1.12	0.19	6.03						
CENT5	1.39	0.23	6.07						
REW1			1.00						
REW2			0.67	0.20	3.26*				
REW3			1.35	0.24	5.68				
CONF1					1.00				
CONF2					0.99	0.10	10.37		
CONF3					0.90	0.09	10.53		
CONF5					0.91	0.10	9.39		
CONF6					0.31	0.09	3.47		
CONF7					0.76	0.10	7.82		
RISK1							1.00		
RISK2							0.33	0.19	1.73***
RISK4							0.83	0.22	3.80
RISK5							0.50	0.20	2.47**
RISK6							1.22	0.27	4.58

^a If not indicated otherwise, all factor loadings significant at <0.001 level.

* p < 0.01; ** p < 0.05; *** p < 0.1; (two-tailed)

Table 19 (continued)

South African Data

Confirmatory Factor Analysis – Market Orientation Scale

	MO		
	<i>SE</i>	<i>t</i> ^{<i>a</i>}	
INS1	1.00		
INS2	0.90	0.10	9.09
INS3	1.00	0.11	8.76
INS4	0.77	0.10	7.92
INS8	0.59	0.10	5.95
INS9	0.79	0.09	8.39
INTE1	0.86	0.11	7.53
INTE2	1.06	0.16	6.69
INTE6	0.87	0.10	8.37
INTE8	0.88	0.12	7.60
INTER1	1.25	0.12	10.35
INTER2	1.00	0.11	9.01
INTER3	0.76	0.09	8.08
INTER4	0.89	0.12	7.71
INTER5	0.61	0.11	5.68
INTER6	1.10	0.11	9.75

^a If not indicated otherwise, all factor loadings significant at <0.001 level.

* p < 0.01; ** p < 0.05; *** p < 0.1; (two-tailed)

Market orientation scale. Although Ruekert's (1992) scale has performed well in other research environments, the specific context and industry in the present study produced somewhat different results. Initial CFA including all scales showed that for both countries the MO scale did not fit the proposed three factor second order structure well. However, items which intended to measure a sub-dimension loaded significantly on their factor. Also coefficient alphas for the three factors were all >0.71 suggesting composite reliability of the sub-scales (*Table 16*). Examining the latent variable inter-correlations and their 90 percent confidence interval indicated a possible one-factor solution. Comparing the competing models (three factor second-order versus one factor), RMSEA, CFI, and NNFI (TLI) improved, pointing to an improvement of the overall fit of the one-factor model over the three-factor model.

As reviewed in the literature section, there are two fundamentally similar perspectives on the market orientation construct: the philosophical-cultural and the behavioural perspective. The reason why the items of Ruekert's (1992) MO scale do not follow the distinct three factor structure could be that they combine elements that are philosophical-cultural and behavioural in nature. A more technical reason could be the relatively small sample size but also possibly the cross-cultural context and relative lack of diversity in the sample, since all respondents are employed in a single industry. The results suggest that although the common meaning of MO is clear to the respondents, they may not distinguish between the three sub-dimensions. Since it is the intention of this study to measure MO it is important that the fit of the model is adequate, composite reliability is good (coefficient alpha equals 0.89 for Germany and 0.92 for South Africa), and the scale item correlation within the MO scale is high as opposed to low correlations with the other scales. Therefore, it has been decided to use a one factor solution representing the MO construct on a uni-dimensional scale instead of forcing the items to load on one of the three factors.

Seven items of the scale were somewhat problematic (low factor loadings, low level of significance). As with the SAS scale looking at the wording of the items and their performance in previous studies, it was decided to drop them.

The item *“In our organization, beating the competition is more important than financial performance.”* (INT3) was previously found to be problematic in the EM context. Burgess and Nyajeka (2005) suggest that the wording of the item might be too abrupt in this specific cultural environment. Also, the question might not have been meaningful to all respondents, since it tabs specific strategic marketing behaviour in which not everyone is involved. This is also true for two other items *“We focus on markets where we have competitive strength.”* (INT5) and *“Customers and their needs are a more important part of our planning than products or product groups.”* (INT7), which have therefore been dropped from the scale. Four more items were dropped since they did not apply to the specific research environment, namely the automotive manufacturer and supplying industry. *“The prices we charge are determined by how much a product is worth to the customer.”* (INT4) might not apply to both manufacturers and suppliers, since suppliers are often bound to prices given by the industry. Market research is handled differently as in other industries. Manufacturers ask for specific components tailored to meet their needs instead of suppliers doing their own market research. This special supplier-customer relationship is also the reason why the two items *“In our organization, market research is used to divide markets into groups.”* (INS6) and *“We obtain ideas from customers to improve our products.”* (INS7) have not been included, since segmenting markets does not apply to automotive suppliers as it does for the manufacturers. The term *customer* could lead to misunderstandings among suppliers, as it could be interpreted as direct customers or end consumers of the finished product.

It is believed that not including the listed items would not alter the measurement of the latent variable MO and they were therefore dropped. All remaining factor loadings were

statistically significant at the 0.0001 level and exceeded 0.5 for all but two German items as indicated in *Table 18*, *Table 19* and *Table 20*.

Antecedents of market orientation scale. The first CFA including five factors and all items of the AoMo scale revealed some unsatisfying factor loadings, t-values and model fits. The items of one factor, *formalization*, were all but two reversely coded and performed badly in the scale. Referring to the EM context, where negatively worded items caused problems in previous studies (e.g. Steenkamp & Burgess, 2002; Wong et al., 2003) and considering that these effects have been confirmed in the present study's SAS scale, it was decided to exclude the factor prior to further analyses.

From the remaining factors, a total of five items also showed low factor loadings and insignificant t-values. Three of them were directly related to salespeople and might not have been meaningful to the respondents from different departments. Therefore the items “Salespeople’s performance in this business unit is measured by the strength of relationships they build with customers.” (REW4), “Salespeople’s monetary compensation is almost entirely based on their sales volume.” (REW5), and “We use customer polls for evaluating our salespeople.” (REW6) were dropped. The item “Top managers in this business unit like to take big financial risks.” (RISK3) showed a very low significance in the German data set and was therefore dropped. The item “Protecting one’s departmental turf is considered to be a way of life in this business unit.” (INT4) was dropped in a previous study due to unacceptable loadings, standardized residuals, and suggestion by modification indices. Burgess and Nyajeka (2005) make the item’s terseness accountable for the bad performance in their specific research environment and dropped it, claiming that doing so did not impact the meaning of the latent factor. In the South African data, all but three (two for Germany) of the remaining items of the AoMo scale were significant at the 0.001 level and showed acceptable factor loadings.

4.3.1.4 Univariate Statistics

In the next step, univariate statistics were calculated for the re-specified scales. Arithmetic means, medians, modes, variances, standard deviations, as well as sample sizes for both data sets are reported in *Table 21*. *Table 20* shows distributions of demographic data such as gender, age, position, and language. A total of 55 South African companies and 16 German companies participated in the survey. Their geographic locations in the country are reported in *Figure 13* and *Figure 14* in the Appendix. Benchmark reports including data on the AoMo, MO, and BP were generated for the participating companies.

Table 20
Demographics

		Germany	South Africa
Gender	male	139	132
	female	51	39
Age	< 30 years	54	24
	31 – 40 years	60	48
	41 – 50 years	55	52
	51 – 60 years	20	30
	> 60 years	1	17
Position	Superior (personnel responsibility)	63	135
	Subordinate (no personnel responsibility)	127	36
Subordinates	< 5	157	99
	6-20	20	49
	21-100	9	13
	> 100	4	10
Language ^a	Afrikaans		46
	English		110
	Ndebele (isiNdebele)		0
	Xhosa (isiXhosa)		1
	Zulu (isiZulu)		2
	Northern Sotho (Sepedi)		0
	Southern Sotho (Sesotho)		3
	Tswana (Setswana)		2
	Swati (siSwati)		0
	Venda (Tshivenda)		0
	Tsonga (Xitsonga)		0
	Other ^b		7

^aThe German questionnaire did not prompt a language question.

^b 5*German, 1*Indian language, 1*Bulgarian

Table 21
Measurement Properties of Revised Scales

		No. of Items	Coeff. alpha	Mode	Germany ^a					South Africa ^b				
				Med.	Mean	Var.	Std.Dev.	Coeff. alpha	Mode	Med.	Mean	Var.	Std.Dev.	
SAS	SC1, SC2, SC3, SC5, SC6, RA1, RA3, RA4, RA5, RA6, SF1, SF2, SF3, SF5, SP1, SP2, SP3, SP4, SP5													
	Social Cynicism	5	0.658	4.00	4.00	3.51	1.29	1.14	0.656	4.00	3.00	2.94	1.32	1.15
	Reward for Application	5	0.523	4.00	4.00	3.79	1.26	1.12	0.551	4.00	4.00	4.00	1.01	1.00
	Social Flexibility	4	0.477	5.00	5.00	4.43	0.51	0.71	0.518	4.00	4.00	4.01	0.63	0.80
	Religiosity	5	0.811	4.00	3.00	3.07	1.77	1.33	0.820	4.00	4.00	3.56	1.46	1.21
	Total Scale	19												
AoMo	CEN1, CEN2, CEN3, CEN4, CEN5, REW1, REW2, REW3, INT1, INT2, INT3, INT5, INT6, INT7, RIS1, RIS2, RIS4, RIS5, RIS6													
	Centralization	5	0.781	2.00	2.00	2.44	1.10	1.05	0.827	2.00	2.00	2.41	1.18	1.08
	Reward Systems	3	0.403	3.00	3.00	2.81	0.98	0.99	0.557	4.00	3.00	2.96	1.23	1.11
	Interdepartmental Conflict	6	0.690	2.00	2.00	2.58	0.93	0.96	0.812	2.00	2.00	2.61	1.11	1.05
	Willingness to take Risks	5	0.493	3.00	3.00	2.91	0.83	0.91	0.484	4.00	3.00	3.03	1.14	1.07
	Total Scale	19												
MO	INS1, INS2, INS3, INS4, INS8, INS9, INT1, INT2, INT6, INT8, INTER1, INTER2, INTER3, INTER4, INTER5, INTER6													
	1-factor summated scale	16	0.886	4.00	4.00	3.81	0.70	0.84	0.915	4.00	4.00	3.90	0.86	0.93
PVQ	POW1, POW2, ACH1, ACH2, HED1, HED2, STI1, STI2, SEL1, SEL2, UNI1, UNI2, UNI3, BEN1, BEN2, TRA1, TRA2, CON1, CON2, SEC1, SEC2													
	Self-Transcendence	5		5.00	5.50	5.41	0.45	0.67		5.00	5.00	4.91	1.10	1.05
	Conservation	6		4.00	4.00	3.91	1.81	1.35		5.00	5.00	4.28	2.00	1.41
	Self-Enhancement	4		4.00	5.00	4.56	1.25	1.12		4.00	4.00	3.82	1.62	1.27
	Openness to Change	4		5.00	5.00	4.85	1.22	1.10		5.00	4.00	4.28	1.83	1.35
	Total Scale	21												

^a N=190; ^b N=171

4.3.1.5 Reliability and Validity

A multitude of fit indexes have been proposed and evaluated (for reviews, see Marsh, Balla, & Hau, 1996; Marsh, Balla, & McDonald, 1988; Mulaik, James, van Alstine, Bennett, Lind, & Stillwell, 1989). There are three categories of indexes for evaluating model fit: (1) absolute fit (e.g. CMIN, NCP, SNCP, GFI, RMSR, RMSEA), (2) incremental fit measures (e.g. TLI, CFI, NFI, AGFI), and (3) parsimony indexes (e.g. PNFI, PGFI, CMIN/df, AIC) (Hair, 1998). Byrne (2001) also suggests considering confidence intervals.

As advised by Kline (1998), this study will report χ^2/df , RMSEA, CFI, NNFI (TLI), as well as the ECVI including a 90 percent confidence interval, as suggested by Arbuckle (1999). Although there are no strict rules for the interpretation of these indices, in the following the basis for their application in the present study is outlined. A low χ^2/df indicates a better model fit. Suggestions for cut-off values for a good fit vary from <2 , <3 and even <5 (Arbuckle & Wothke, 1999; Bollen, 1989). *Root Mean Square Error of Approximation* (RMSEA) (Steiger, 1990) indexes the degree of difference between the observed and implied covariance matrices per degree of freedom. It is therefore sensitive to the complexity of the model. Proposed cut-off values are 0.05 as indicator for a close fit, 0.08 indicating marginal fit, and 0.1 for a poor fit (Browne & Cudeck, 1993). The value of the Comparative Fit Index (CFI) (Bentler, 1990) varies between 0.0 and 1.0. It indexes the relative reduction in lack of fit of a proposed model over the null model. Following Hu and Bentler (1995) values of 0.9 and higher are indicative of acceptable fit. The Non-normed Fit Index (NNFI), also called Tucker-Lewis Index (TLI), was developed in 1973. Based on Bentler and Bonett (1980), cut-off criteria for the TLI range from < 0.85 (unacceptable fit), 0.85-0.89 (mediocre fit), 0.90-0.95 (acceptable fit), 0.95-0.99 (close fit), to 1.00 (exact fit). Later, Hu and Bentler (1998, 1999) revised the start of acceptable fit to 0.95, which was criticized as too restrictive by Marsh, Hau and Wen (2004). The Expected Cross-Validation Index (ECVI) (Browne &

Cudeck, 1993) is particularly useful for model comparisons with smaller sample sizes and should be reported with its 90 percent confidence interval.

Suggested cut-off values for the fit indexes should be used with caution when evaluating model fit. Hu and Bentler (1998) advice against reporting other more or less frequently reported indexes, such as *Goodness of Fit Index* (GFI) (Jöreskog & Sörbom, 1981) and the *Adjusted Goodness of Fit-Index* (AGFI) due to their sensibility against sample size (cf. Anderson & Gerbing, 1984). Sharma, Mukherjee, Kumar and Dillon (2005) also discourage researchers from using the GFI, but rather use NNFI (TLI) as well as RMSEA and suggest cut-off values of less than 0.9 for the NNFI (TLI). Baumgartner and Steenkamp (1996) also suggest their model to fit adequately, although reported fit indexes were as low as 0.79 for the CFI and motivate their decision by the fact that model complexity adversely affects fit indexes (Bollen, 1989; Bone, Sharma, & Shimp, 1989). The authors refer to studies by Anderson and Gerbing (1984), Boyle, Dwyer, Robicheaux and Simpson (1992), Heide and John (1990), Kumar et al. (1992), and Netemeyer, Durvasula and Lichtenstein (1991), which reported similarly low fit indexes. In case of non-normally distributed data, Lei and Lomax (2005) reported that NNFI (TLI) and CFI should be used as the main model fit indicators, since they are more robust than, for example, χ^2 (cf. Browne, 1982; Satorra, 1991).

After each step of the re-specification process, a new CFA was conducted in order to confirm improvement of the fit indices. The total effects lead to a significant enhancement of the model fit as indicated by χ^2/df , RMSEA, ECVI, CFI, and NNFI (TLI). *Table 16* provides a summary of the model results. A list of all items and factors before and after the re-specification of the scales can be found in *Table 32* in the Appendix.

Confirmatory factor analysis was used to estimate a measurement model to evaluate construct reliability and convergent and discriminant validity (cf. Steenkamp & van Trijp, 1991). All latent constructs were estimated in one measurement model with each scale item

loaded on its *a priori* specified factor, and correlation among factors was allowed (Gerbing & Anderson, 1988). In order to establish the scale, one indicator for each latent factor was fixed to 1.0. The lambda-X matrices (*Table 18* and *Table 19*) represent the complete measurement models including all scales for both countries and list factor loadings, errors and t-values for the included items.

Model fit. Maximum likelihood estimates of the German measurement model exhibited acceptable fit indices: $\chi^2/df=1.66$, RMSEA=0.053, ECVI=12.45, CFI=0.85, and NNFI (TLI)=0.84. The South African model fit the data somewhat better represented by $\chi^2/df=1.49$, RMSEA=0.047, ECVI=12.5, CFI=0.92, and NNFI (TLI)=0.91.

Reliability. Reliability was assessed for all subscales using Cronbach's alpha as indicated in *Table 21*. A reason for the relatively low coefficient alpha of some of the factors might be the small number of items, since reliability is a function of the length of the scale (Allen & Yen, 1979). Chen, Cheung, Bond and Leung (2006) report another reason for low coefficient alphas, namely the weak inter-correlations between the items of the scale. However, factor loadings were all positive, indicating that the items did indeed measure the underlying construct in the same direction. Coefficient alphas of the SAS scale are similar to those reported in other studies (cf. Klinger et al., 2004; Chen, Fok, Bond, & Matsumoto, 2006). The same is true for the MO and AoMo scales (cf. Burgess & Nyajeka, 2005).

Although in the present research, coefficient alpha is higher than the standard often recommended in marketing research the results of the confirmatory factor analysis suggest that these data have adequate psychometric properties. The overall fit of the confirmatory factor analysis models in the current research suggests that the models have an acceptable fit to these data. The results reveal that all measurement scale items have significant loadings on their intended factors. In addition, the results provide strong evidence for the convergent and discriminant validity of the latent constructs. This is important because confirmatory factor

analysis, as implemented in the current research, provides information about item correlations to the presumed latent factor they measure after controlling for error variance. The structural model provides information about correlations between latent constructs and their standard errors, from which convergent and discriminant validity of the latent constructs can be determined. Considered in their totality, the results of the confirmatory factor analysis provide evidence supporting the configural measurement invariance of the measurement scales used in the current research (Baumgartner & Steenkamp, 2006; Steenkamp & Baumgartner, 1998; Steenkamp & Baumgartner, 2000; Steenkamp & van Trijp, 1991).

Construct validity. Content and criterion-related validity are assumed, since all scales represent established measurement instruments and have successfully been used in a variety of research environments before (cf. sections *Statements of Hypotheses* and *Literature Review*).

Following Steenkamp and van Trijp (1991), three conditions of convergent validity were investigated by using the CFA approach: (1) the significance of the factor regression coefficients on all items, (2) the substantiality of all factor regression coefficients, and (3) the acceptable overall fit of the model. Estimated correlations between the factors are not excessively high and the standardized loadings of the items were statistically significant for all items as outlined in *Table 18* and *Table 19*, suggesting convergent validity. Discriminant validity was assessed by constructing a 95 percent confidence interval around the correlation coefficients between the latent variables. (*Table 22* and *Table 23*) None of the 36 confidence intervals included 1.0, supporting the discriminant validity of the nine factors.

Table 22
Discriminant Validity ^{a,b} - South African Data

Factor	1		2		3		4		5		6		7		8		9	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
1 SC	0.55	0.14																
(CI)	0.824	0.276																
2 RA	-0.02	0.02	0.05	0.04														
(CI)	0.019	-0.059	0.128	-0.028														
3 SF	0.12	0.06	0.03	0.02	0.30	0.11												
(CI)	0.238	0.002	0.069	-0.009	0.516	0.084												
4 SP	0.09	0.07	0.07	0.03	-0.01	0.06	0.85	0.15										
(CI)	0.227	-0.047	0.129	0.011	0.108	-0.128	1.144	0.556										
5 CENT	0.13	0.05	-0.01	0.01	-0.01	0.04	0.06	0.05	0.35	0.11								
(CI)	0.228	0.032	0.010	-0.030	0.068	-0.088	0.158	-0.038	0.566	0.134								
6 REW	0.01	0.05	0.04	0.02	0.05	0.04	0.07	0.06	-0.07	0.04	0.34	0.09						
(CI)	0.108	-0.088	0.079	0.001	0.128	-0.028	0.188	-0.048	0.008	-0.148	0.516	0.164						
7 CONFL	0.10	0.06	0.01	0.02	-0.03	0.05	-0.01	0.07	0.24	0.06	-0.27	0.06	0.70	0.12				
(CI)	0.218	-0.018	0.049	-0.029	0.068	-0.128	0.127	-0.147	0.358	0.122	-0.152	-0.388	0.935	0.465				
8 RISK	-0.05	0.05	0.00	0.02	0.04	0.04	0.04	0.06	-0.16	0.05	0.19	0.06	-0.20	0.06	0.29	0.10		
(CI)	0.048	-0.148	0.039	-0.039	0.118	-0.038	0.158	-0.078	-0.062	-0.258	0.308	0.072	-0.082	-0.318	0.486	0.094		
9 MO	-0.13	0.05	0.03	0.02	-0.01	0.04	0.10	0.05	-0.16	0.04	0.16	0.04	-0.27	0.06	0.18	0.05	0.40	0.07
(CI)	-0.032	-0.228	0.069	-0.009	0.068	-0.088	0.198	0.002	-0.082	-0.238	0.238	0.082	-0.152	-0.388	0.278	0.082	0.537	0.263

^a Discriminant validity was assessed by constructing a 95% confidence interval around the correlation coefficients between the latent variables.

^b None of the 36 confidence intervals included 1.0, supporting the discriminant validity of the nine factors.

Table 23Discriminant Validity ^{a,b} - German Data

Factor	1		2		3		4		5		6		7		8		9	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
1 SC	0.07	0.04																
(CI)	0.148	-0.008																
2 RA	0.00	0.01	0.07	0.03														
(CI)	0.020	-0.020	0.129	0.011														
3 SF	0.01	0.01	0.01	0.01	0.02	0.02												
(CI)	0.030	-0.010	0.030	-0.010	0.059	-0.019												
4 SP	0.03	0.02	0.07	0.03	-0.01	0.02	0.84	0.15										
(CI)	0.069	-0.009	0.129	0.011	0.029	-0.049	1.134	0.546										
5 CENT	0.04	0.02	-0.03	0.02	0.00	0.01	0.00	0.04	0.23	0.07								
(CI)	0.079	0.001	0.009	-0.069	0.020	-0.020	0.078	-0.078	0.367	0.093								
6 REW	-0.05	0.02	0.06	0.02	-0.01	0.01	0.00	0.05	-0.10	0.03	0.24	0.07						
(CI)	-0.011	-0.089	0.099	0.021	0.010	-0.030	0.098	-0.098	-0.041	-0.159	0.377	0.103						
7 CONFL	0.03	0.02	-0.04	0.02	-0.01	0.01	-0.02	0.04	0.05	0.02	-0.19	0.04	0.24	0.07				
(CI)	0.069	-0.009	-0.001	-0.079	0.010	-0.030	0.058	-0.098	0.089	0.011	-0.112	-0.268	0.377	0.103				
8 RISK	-0.01	0.01	0.00	0.01	-0.01	0.01	0.01	0.03	-0.06	0.02	0.08	0.03	-0.02	0.02	0.08	0.04		
(CI)	0.010	-0.030	0.020	-0.020	0.010	-0.030	0.069	-0.049	-0.021	-0.099	0.139	0.021	0.019	-0.059	0.158	0.002		
9 MO	-0.02	0.01	0.01	0.01	0.00	0.01	0.00	0.03	-0.04	0.02	0.12	0.03	-0.10	0.03	0.05	0.02	0.18	0.04
(CI)	0.000	-0.040	0.030	-0.010	0.020	-0.020	0.059	-0.059	-0.001	-0.079	0.179	0.061	-0.041	-0.159	0.089	0.011	0.258	0.102

^a Discriminant validity was assessed by constructing a 95% confidence interval around the correlation coefficients between the latent variables.^b None of the 36 confidence intervals included 1.0, supporting the discriminant validity of the nine factors.

4.3.2 Hypothesis Testing

After preparing the data and successfully testing the reliability and validity of the constructs using ML in LISREL, as well as reporting basic univariate statistics, this section will focus on testing the hypothesized nomological networks and the relationships among its separate constructs.

In order to outline the relationships between measures of constructs, indicators, the underlying construct, and the hypothesized relationships between them, it is necessary to produce a model (Hoyle, 2000). Literature holds different strategies for the analysis of the postulated model. One common approach is to estimate the full model, including all scales, at once. Alternatively, the estimations of the measurement part can be separated from the simultaneous analysis of the measurement and structural part, allowing one to perform possible modifications between the two steps. Debates about the multistep approaches can be found for example in Anderson and Gerbing (1988, 1992), Fornell and Yi (1992a, 1992b), as well as in Hayduk (1996). An article by Hayduk and Glaser (2000) pays special attention to presenting a four-step procedure (see also Mulaik & Millsap, 2000).

Following Anderson and Gerbing (1988), the present study incorporates a two-stage approach to analyze the data and test the hypothesized model. The advantages of this approach are outlined by Fang, Palmatire and Evans (2008). One advantage is the avoidance of potential confounding effects between the measurement and structural model, and another being a lesser demand on sample size, since the overall complexity is reduced by separating the two models.

The latent variable *partial least squares* (PLS) approach was found to be the most appropriate approach to analyse the data and estimate the hypothesized relationships in the

present study.⁸⁴ Following Bagozzi and Yi (1997), there are several reasons that point to the use of PLS as opposed to ML in LISREL in the case of the present study. This section will address these issues and thus motivate the suitability of the PLS estimator. In the next step, the procedure as well as its application will briefly be described, followed by the results of the analyses. Latent variables structural equation analyses can be accomplished by Wold's (1985) PLS approach. Unlike ML in LISREL, which is sometimes used as a synonym for covariance-based SEM, PLS can be described as variance-based SEM (Haenlein & Kaplan, 2004). PLS can be described as a component based SEM technique, being similar to regression, but modelling the relationships between latent variables (i.e. structural paths) and the latent variable and its indicators (i.e. measurement paths) at the same time (Chin, Marcolin, & Newsted, 2003).⁸⁵

The underlying hypotheses of this research will be assessed systematically using the latent variable PLS approach to structural equation modelling. PLS should not be viewed as an alternative to LISREL, which offers less stringent assumptions, but as a prediction-orientated approach that is quite different from covariance structure analysis (Fornell & Cha, 1997). Bagozzi and Yi (1997) propose the use of PLS over ML in LISREL when (1) the multivariate normality assumption is violated, (2) the sample size is small, (3) the structural model is complex and therefore (4) non-convergent or improper solutions are likely to occur. All four conditions are met in the present study.

4.3.2.1 Restrictions and Assumptions

PLS was found to be the appropriate method, since it avoids inadmissible solutions and factor indeterminacy, and is therefore well suited to accommodate the large number of variables and the complexity of the hypothesized effects in the present model (Fornell &

⁸⁴ For a similar split approach choosing a different estimator for testing hypotheses see Atuahene-Gima and Li (2004); Chaudhury and Karahanna (2006); Kamis, Koufaris and Stern (2008) and Richard, McFarland, Bloodgood and Payan (2008).

⁸⁵ For a thorough description of the objectives of PLS as well as its estimation process, see Barclay, Higgins and Thompson (1995) as well as Bagozzi and Yi (1997). Cool, Dierickx and Jemison (1989) offer a good discussion of the PLS model structure.

Bookstein, 1982; Wold, 1985). It places minimal restrictions on the sample size and the data's residual distribution (Chin et al., 2003). Latent variable partial least squares modelling do not require the assumption of multivariate normality (Fornell & Bookstein, 1982; Fornell & Cha, 1994). Nevertheless, there are a number of assumptions and constraints when using PLS as an estimator.

Unlike ML methods, where all items of a single factor are assumed to be equally reliable and therefore summed up, the PLS algorithm treats each indicator separately. The estimator allows each indicator to vary in the amount of how much it contributes to the combined score of the latent factor. PLS therefore assigns lower weights to weaker indicators, thus improving the reliability for the construct estimate (Lohmöller, 1989; Wold, 1982, 1985, 1989). This is of particular advantage, since the present study uses a number of items loading weaker than others on their factor in order not to completely lose their explanatory properties.⁸⁶

PLS offers three different weighting schemes (centroid, factor, and path weighting); however, Haenlein and Kaplan (2004) demonstrate that these all result in very similar final outputs.⁸⁷ Another issue in SEM is the measurement scales used. In contrast to ML in LISREL, PLS does not involve assumptions about the scale of measurement (Fornell & Bookstein, 1982) and therefore works on either ordinal or interval scaled variables (Haenlein & Kaplan, 2004). Cassel, Hackl and Westlund (1999) showed that PLS is fairly robust against violations of the distributional properties of the analyzed data, which means that skewness or multicollinearity of the indicators, as well as slight misspecification of the structural model, do not result in major effects in the output. Another advantage of the PLS estimator over ML is the relatively low requirements on sample sizes. In contrast to ML, where low sample sizes

⁸⁶ Similarly low factor loadings can be found in the studies of Fornell, Lorange and Ross (1990) and Johansson and Yip (1994).

⁸⁷ For a detailed description of the different weighting schemes see Lohmöller (1989). Following common practice, the present study opts for a path weighting scheme.

can lead to problematic solutions, unacceptable model fit (Nasser & Wisenbaker, 2003) as well as un-interpretable results such as negative variances (i.e. Haywood cases) or other improper solutions (Boomsma, 1985; Dillon, Kumar, & Mulani, 1987; Forell & Bookstein, 1982; Gerbing & Anderson, 1987), PLS can deal with much smaller sample sizes (e.g. Chin & Newsted, 1999). The requirements for sample sizes proposed by Chin and Newsted (1999), calculated by the ratios between indicators and observations, as well as path to indicator heuristic (10:1) are met.

Given all the favourable features of PLS, there are certain constraints in its applicability that should be mentioned. One problem is the limited-information nature of the estimator. PLS parameter estimates are less efficient than full-information estimates (Fornell & Bookstein, 1982). Another characteristic that needs to be taken into account is known as *consistency at large*. Consistency at large requires the number of indicators per factor, as well as the number of cases in the sample, to become infinite in order to converge on the parameters of the structural model (Lohmöller, 1989; McDonald, 1996). Hence, in all real-life studies PLS tends to overestimate loadings and underestimate correlations between the factors (Dijkstra, 1983). Given the fact that under the specific circumstances advantages outnumber the constraints of PLS, the estimator has been applied in a number of studies in different business related disciplines⁸⁸.

⁸⁸ e.g. Birkinshaw et al., 1995; Cool et al., 1989; Cording, Christmann, & King, 2008; Fornell et al., 1990; Smith & Barclay, 1997; Zinkhan, Joachimsthaler, & Kinnear, 1987

4.3.2.2 Model Fit

In contrast to estimators as used in LISREL, PLS parameter estimation does not seek to reproduce the observed covariance matrix as closely as possible, but tries to minimize the error in the endogenous constructs (Hulland, 1999). One measure to determine how well this has been achieved for the endogenous constructs is the *explanatory power of structural models* (R^2) (cf. Fornell & Cha, 1997). Acceptable values vary in literature. Chin (1998) suggest R^2 to be larger than 0.4 (= 40 percent explained variance) but real life study reports range from a low 12 percent (Birkinshaw, Morrison, & Hulland, 1995) to a high of 64 percent (Cool et al., 1989). Hulland (1999) strongly advises to report R^2 values for all endogenous constructs, even though not all studies do so. Even though some PLS software report the goodness-of-fit statistic, the author warns about the use of Bentler-Bonett normed fit index (Bentler & Bonett, 1980) because of its incorrect assumptions in PLS. Another index worth reporting is the (cross-validated) redundancy index Q^2 (Stone-Geisser criteria) that can be calculated for every endogenous construct. Q^2 evaluates how well the independent variables describe their depended counterparts in the structural model (Chin, 1998; Ringle, 2004). The value for Q^2 should be larger than zero (Fornell & Cha, 1994). In order to estimate Q^2 a blindfolding procedure is applied. Following Chin (1998) the omission distance is set to seven.

4.3.2.3 Testing the Hypothesized Relationships

While PLS estimates the regression coefficients, it does not provide measure for the statistical significance of the results. Since normality is not an assumption in PLS, t-values need to be obtained using a bootstrapping procedure (Cramer III, Bunce, Patterson, & Frank, 2006). *SmartPLS 2.0* offers the option of creating a bootstrap sample and allows it to run for the complete model. The number of bootstrap samples (J) directly affects the accuracy of the numeric evaluation of the bootstrap sampling distribution (Preacher & Hayes, 2006; Yung & Chan, 1999). Following previous research using PLS, the bootstrap procedure will be

employed using $J=1\ 000$ (re-samples) and individual sign changes (cf. Tenenhaus, Vinzi, Chatelin, & Lauro, 2005). Based on the outcomes, the significance level can be computed.

In addition to the direct effects, a number of interaction effects have been hypothesized. The hierarchical process outlined by Chin et al. (2003) for testing interaction effects using PLS is similar to that used in multiple regression, comparing the results of one model with another one without the interacting construct. The path estimate from the interaction construct gives information on how a change in the level of the moderator construct would change the influence of the main construct on the dependent construct. Following Baron and Kenny (1986) the moderator hypotheses can be seen as supported if the interaction path is significant. Possible significant main effects of the independent variable and the moderator are not directly relevant conceptually to testing the hypothesis. In order to assess the overall effect size f^2 , the squared multiple correlation (R^2) for the model excluding the interaction construct is compared to R^2 for the interaction model (cf. Cohen, 1988).

$$f^2 = \frac{R^2_{inter} - R^2_{main}}{1 - R^2_{main}}$$

Chin et al. (2003) point out that a small f^2 does not necessarily imply that the observed effect is unimportant. As suggested by Cohen (1988) values of $f^2=0.02$, 0.15, and 0.35 will be interpreted as small, medium, and large effects.

Additionally, the accuracy of the path estimates to the true effects needs to be assessed. The estimates of the structural paths tend to be more accurate as the reliability score for the estimated construct increases. Following Carte and Russell (2003), testing for interaction effects includes the *F-statistic* testing whether the variance explained due to the moderated effects is significant beyond the main effects. The following formula is applied:

$$F = \frac{\frac{\Delta R^2}{df_{inter} - df_{main}}}{\frac{1 - R^2_{inter}}{N - df_{inter} - 1}}$$

Lastly, standardized indicators are chosen for the analysis, since Likert-type scales were employed in the study and the indicators were considered to be theoretically parallel (cf. Chin et al., 2003).

4.3.2.4 Evaluation of Structural Model

In this section, the direct and interaction effects between the different constructs as outlined in the previous chapter will be tested.

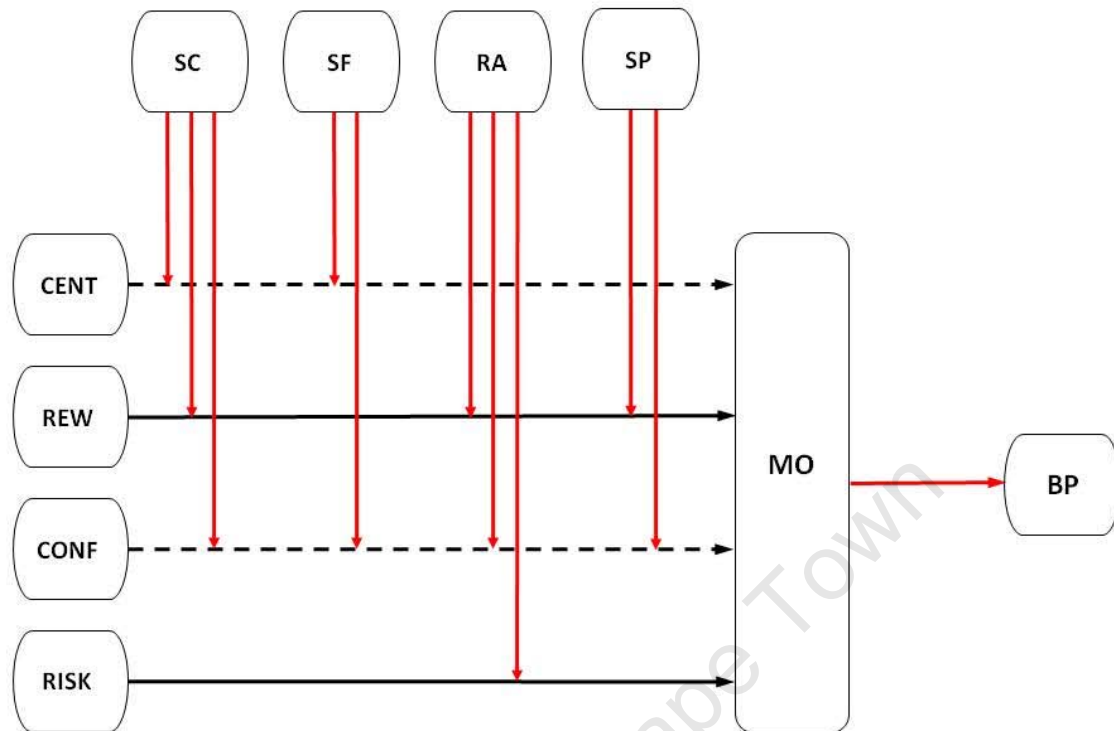
Direct effects. In the first step, the main model, with its hypothesized direct effects between the four factors of AoMo and MO, as well as the relationship between MO and the three measures of BP, is simultaneously tested.⁸⁹

South African data. For clearer exposition, all item loadings are omitted in the representation of the structural models. The first relationships tested included the four AoMo (*centralization, reward systems, interdepartmental conflict, and willingness to take risks*), the one factor construct of MO, as well as the three measures of BP (*market share, profitability, and turnover*). All hypothesized relationships were tested in one structural model as outlined in *Figure 7*. The results of the hypotheses tests are reported in *Table 24*.

⁸⁹ Centralization=CENT; Reward Systems=REW; Interdepartmental Conflict=CONF; Willingness to Take Risks=RISK; Market Orientation=MO

Figure 7

Conceptual Model of Structural Relations – Tested Effects



Testing of the hypotheses showed that the data supported both predicted relationships between the AoMo and MO, as well as the influence of MO on BP. The explanatory power of the structural model ranges from $R^2=0.370$ for MO, 0.095 (SHARE), 0.155 (PROFIT), to a low 0.054 (TURNOVER). The redundancy index Q^2 for MO equals 0.159. All paths between AoMo and MO are significant and signs of the coefficients between centralization and MO, as well as between interdepartmental conflict and MO, are negative as predicted.

Therefore, hypotheses H_1 , H_2 , H_3 and H_4 will be accepted for the South African data. Effect sizes range from $f^2=0.03$ (CENT), $f^2=0.02$ (REW), $f^2=0.07$ (CONF), to $f^2=0.1$ (RISK) indicating weak to medium effects throughout.

Of the three measures of BP, PROFIT shows the highest correlation ($\beta_{MO \rightarrow \text{PROFIT}}=0.394$; $t=5.73$) with MO, followed by SHARE ($\beta_{MO \rightarrow \text{SHARE}}=0.307$; $t=4.58$), and

TURNOVER ($\beta_{\text{MO} \rightarrow \text{TURNOVER}} = 0.232$; $t = 3.28$). All path coefficients between MO and the three measures of BP are significant, supporting the hypothesized relationships.

Therefore, hypothesis H_5 will be accepted.

Table 24

Direct Effects Between AoMo, MO, and BP (South Africa)^a

Predictor variables	Criterion variables							
	MO		SHARE		PROFIT		TURNOVER	
CENT	-0.166	(2.174) ^{***}						
CONF	-0.263	(3.304) [*]						
REW	0.130	(2.104) ^{***}						
RISK	0.279	(3.637) [*]						
MO			0.307	(4.578) [*]	0.394	(5.728) [*]	0.232	(3.284) [*]

^a Standardized path coefficients and their corresponding t-values are reported.

* $p < 0.001$; ** $p < 0.01$; *** $p < 0.05$ (one-tailed)

German data. The German model of the hypothesized direct effects includes the four AoMo and the one-factor solution of MO. Relationships between MO and BP were disregarded due to the exclusion of the information on SHARE, PROFIT and TURNOVER as outlined in the previous chapter.

R^2 for the latent factor MO equals 0.321, Q^2 equals 0.116. As hypothesized the AoMo, REW ($\beta_{\text{REW} \rightarrow \text{MO}} = 0.251$; $t = 3.67$) and RISK ($\beta_{\text{RISK} \rightarrow \text{MO}} = 0.170$; $t = 2.39$) show positive path coefficients and are both significantly correlated with MO, although with different significance levels. CENT as well as CONF produce the predicted negative signs, however only CONF shows a significant path coefficient ($\beta_{\text{CONF} \rightarrow \text{MO}} = -0.316$; $t = 4.63$). Effect sizes range from $f^2 = 0.07$ (REW), $f^2 = 0.12$ (CONF), to $f^2 = 0.03$ (RISK) indicating weak to medium effects. Table 25 presents the results from testing the hypotheses on the German data set.

Hypotheses H_2 , H_3 and H_4 can be confirmed for the German data, hypothesis H_1 must be rejected, since the predicted relationship between CENT and MO is non-significant.

Table 25Direct Effects Between AoMo and MO (Germany)^a

Predictor variables	Criterion variable	
	MO	
CENT	-0.038	(0.774)
CONF	-0.316	(4.633)*
REW	0.251	(3.670)*
RISK	0.170	(2.385)**

^a Standardized path coefficients and their corresponding t-values are reported.* $p < 0.001$; ** $p < 0.01$; *** $p < 0.05$ (one-tailed)

Interaction effects. Besides the direct effects, a number of indirect effects between the latent constructs have been hypothesized. These will be tested in the following step, applying the methods described above.

All moderation effects were computed following the procedure of Chin et al. (2003) by cross multiplying the standardized items of each construct. The tested interaction effects are included in *Figure 7*.

The estimated path coefficient for the interaction term provides information regarding the interaction effect. This estimate gives information as to how much a unit change in the moderator variable would change the relationship between the independent and the dependent variable (Chin, Marcolin, & Newsted, 1996).

Analysis shows that there is a significant negative main effect between CONF and MO ($\beta_{\text{CONF} \rightarrow \text{MO}} = -0.246$; $t = 3.38$). When adding the moderator variable RA there is a positive and significant interaction effect ($\beta_{\text{CONF} * \text{RA}} = 0.284$; $t = 3.45$) indicating an increase in the effect of CONF on MO as RA increases. For very low levels of RA there is no effect on MO. Following Chin et al. (2003) the Cohen's f^2 moderating size effect equals 0.14, suggesting a medium effect. The variance explained due to the moderated effect is significant beyond the main effect as indicated by the F-statistic ($F = 13.3$). The German data confirms the negative effect of CONF on MO ($\beta_{\text{CONF} \rightarrow \text{MO}} = -0.268$; $t = 4.46$). However, in contrast to the findings from

the South African data, RA seems to strengthen the negative main effect, as indicated by a significant negative interaction coefficient ($\beta_{\text{CONF}*\text{RA}}=-0.255$; $t=3.83$). The effect size can be reported as small to medium ($f^2=0.10$), the F-statistic is significant ($F=9.3$). H_{8c} can only be partly accepted for the German data.

As previously indicated, both the South African and the German data support the hypothesized negative direct effect of CONF on MO. Adding the social axiom SC to the model as a moderator, path coefficients for both countries support the significant indirect effect, which for the South African data is slightly less distinct ($\beta_{\text{CONF}*\text{SC}}=0.157$; $t=2.39$) than for the German data ($\beta_{\text{CONF}*\text{SC}}=0.263$; $t=3.47$). Similar to the moderating effect of RA on the CONF->MO relationship, the direct effect seems to get stronger the higher the level of SC and is insignificant for very low levels of SC. The effect size f^2 signifies a small to medium effect for both models ($f^2=0.07$ for South Africa; $f^2=0.09$ for Germany). The explained variance is significantly higher than of the main effect indicating an improvement to the model by adding the interaction term. This finds support in $F=5.71$ (South Africa) and $F=8.87$ (Germany).

The hypothesized moderating effect of SC on the CONF->MO link finds support. Therefore, H_{8a} can be accepted.

The third social axiom tested for moderation effects on the CONF->MO relationship is SP. The interaction effect shows path coefficients for both data sets that are significant and positive ($\beta_{\text{CONF}*\text{SP}}=0.300$; $t=3.16$) for South Africa ($\beta_{\text{CONF}*\text{SP}}=0.159$; $t=2.06$ for Germany), leading to the assumption that SP moderates the CONF->MO link in a similar fashion SC does. Effect sizes are medium for South Africa ($f^2=0.13$) and small for the German model ($f^2=0.06$). The F-statistic for South Africa is $F=12.4$ and $F=5.6$ for Germany, indicating significant improvements in the both models.

The estimated models support the hypothesized moderating effect of SP on the CONF->MO link. Therefore, H_{8d} can be accepted.

The last variable hypothesized to moderate the CONF->MO relationship is SF. The interaction term has significant negative path coefficients for both data sets. South Africa ($\beta_{\text{CONF}*\text{SF}}=-0.166$; $t=2.62$) and Germany ($\beta_{\text{CONF}*\text{SF}}=-0.201$; $t=3.43$), indicating that a high level of SF would strengthen the effect of the independent on the dependent variable. Effect sizes are small for both models ($f^2=0.05$ for South Africa and $f^2=0.06$ for Germany). The F-statistic is somewhat lower for South Africa ($F=4.1$) than for Germany ($F=5.4$), but is nonetheless significant.

Hypothesis H_{8b} can be accepted.

Both South African and German data support the positive direct effect between REW and MO (South Africa: $\beta_{\text{REW->MO}}=0.131$; $t=2.107$ and Germany: $\beta_{\text{REW->MO}}=0.259$; $t=3.93$) with the effect being stronger in the German data. When introducing the social axiom SC in the model the German data show a significant interaction effect ($\beta_{\text{REW}*SC}=0.250$; $t=3.36$), indicative of a strengthening of the direct effect between REW and MO. Although the sign in the South African data points in the same direction, the path coefficient of the indirect effect is insignificant ($\beta_{\text{REW}*SC}=0.111$; $t=1.58$). The effect size in the German data is small to medium ($f^2=0.08$); in the South African sample f^2 is small ($f^2=0.05$). $F=8.4$ (Germany) and $F=4.2$ (South Africa) are characteristic of a significant amount of variance explained by the moderation effect over the main effect suggesting an improvement of the model in both data sets.

Even though significant evidence for a moderating effect of SC on the REW->MO relationship can only be provided for the German data, H_{7a} can be accepted.

The second moderator effect tested on the REW->MO relationship is the social axiom RA. The direction of the hypothesized interaction effect is not distinct. South African data show a significant negative path coefficient of the interaction term ($\beta_{\text{REW*RA}}=-0.210$; $t=3.39$), whereas in the German sample, the effect seems to be positive ($\beta_{\text{REW*RA}}=0.238$; $t=4.25$). In both cases the effect size is the same and classified as small to medium ($f^2=0.09$). Both F-statistics are significant ($F=8.5$ for South Africa and $F=9.0$ for Germany).

Due to the opposing signs in the interaction effect, hypothesis H_{7b} can only be partly accepted for the German data.

As hypothesized, the interaction effect SP on the REW->MO link is in both cases significant and positive, although it is less distinct in the South African sample ($\beta_{\text{REW*SP}}=0.168$; $t=2.66$) than in the German sample ($\beta_{\text{REW*SP}}=0.227$; $t=3.23$). It can be assumed that the social axiom SP strengthens the REW->MO relationship. Effect sizes are small to medium ($f^2=0.07$ for South Africa and $f^2=0.1$ for Germany). The F-statistic indicates a somewhat higher significance for the German effect ($F=10.2$) than for the South African effect ($F=6.5$).

Hypothesis H_{7c} can be accepted.

The next path under investigation is the negative relationship between CENT and MO. Whereas the South African data support the hypothesized direct effect, the path coefficient for the German data is insignificant. Nevertheless, both samples are tested for the hypothesized interaction effects.

The first social axiom hypothesized to interact on the aforementioned relationship is SC. The positive path coefficients of the moderator variable ($\beta_{\text{CENT*SC}}=0.149$; $t=2.37$ for South Africa and $\beta_{\text{CENT*SC}}=0.263$; $t=3.36$ for Germany) are indicative of an interaction effect, as hypothesized. The moderator seems to act similar to SC interacting on the CONF->MO

relationship, strengthening the direct effect for high levels of the moderator. Effect sizes for both samples are small to medium ($f^2=0.06$ for South Africa and $f^2=0.09$ for Germany) and the F-test indicates a significant improvement of the interaction model over the main model ($F=5.4$ for South Africa and $F=8.9$ for Germany).

Despite the German sample showing an insignificant direct path in the main model, both samples indicate significant interactions effects of the moderator variable. Therefore, H_{6a} can be accepted.

When testing the second hypothesized interaction effect on the CENT->MO relationship, namely SP as a moderator, the outcome is less clear and somewhat difficult to interpret. In the South African sample SP has a positive path coefficient for the South African sample ($\beta_{\text{CENT*SP}}=0.144$; $t=2.24$) and a negative coefficient for Germany ($\beta_{\text{CENT*SP}}=-0.107$; $t=1.78$). Both effect sizes are very small ($f^2=0.03$ for South Africa and $f^2=0.04$ for Germany) and the F-statistic indicates a low significance of the improvement of the interaction model over the main model ($F=2.8$ for South Africa and $F=4.1$ for Germany).

Therefore, hypothesis H_{6c} is not supported.

The last hypothesized interaction effect on the CENT->MO relationship refers to SF as a moderator. Interaction effects show different signs for the two samples ($\beta_{\text{CENT*SF}}=-0.163$; $t=2.95$ for South Africa and $\beta_{\text{CENT*SF}}=0.207$; $t=3.06$ for Germany), indicating opposing effects of the moderator. Furthermore, the effect sizes for both samples are small ($f^2=0.04$ for South Africa and $f^2=0.06$ for Germany). Together with a low significance of improvement in the South African sample indicated by $F=3.5$ ($F=5.7$ for Germany), the results of testing the interaction effect are inconsistent and ambiguous.

Therefore, hypothesis H_{6b} cannot be accepted.

Lastly, the relationship between RISK and MO is investigated. In the first step, the moderating role of SP is tested. Testing for the interaction effect reveals only a clear result for the German sample with $\beta_{\text{RISK*SP}}=0.204$; $t=3.00$, a small to medium effect size ($f^2=0.08$) and a significant F-statistic ($F=8.1$). On the other hand, in the South African sample, the interaction effect shows a negative sign ($\beta_{\text{RISK*SP}}=-0.151$; $t=1.87$), a small effect size ($f^2=0.03$) and a very low significance of the interaction model over the main model ($F=2.6$).

Therefore, only the German data support hypothesis H_{9b} and hence it can only be partly accepted.

The second potential moderator to the RISK->MO relationship is RA. As hypothesized, RA has a moderating effect on the RISK->MO relationship as indicated by the significant, positive path coefficients ($\beta_{\text{RISK*RA}}=0.291$; $t=4.05$ for South Africa and $\beta_{\text{RISK*RA}}=0.222$; $t=3.36$ for Germany). These results indicate a strengthening of the direct effect through the moderator variable. Effect sizes are medium for South Africa ($f^2=0.14$) and small to medium for Germany ($f^2=0.08$). The F-test indicates a somewhat higher value for the South African effect ($F=13.8$) than for the German effect ($F=7.6$) but both being highly significant.

Given the results for both samples, hypothesis H_{9a} can be accepted.

Table 26 summarizes the relevant statistics of the tested interaction effects.

Table 26

Interaction Effects of Social Axioms on the AoMo->MO Relationship

Effect on MO	South Africa				Germany				Hypothesis		
	β	<i>t-value</i>	<i>f</i> ²	<i>F</i>	β	<i>t-value</i>	<i>f</i> ²	<i>F</i>	South Africa	Germany	
REW	0.131	2.107***			0.259	3.929*					
SC	-0.127	1.863***			-0.030	0.638					
(REW*SC)	0.111	1.576	0.050	4.24	0.250	3.315*	0.084	8.39	<i>H</i> _{7a}	√	√
CONF	-0.22	2.766**			-0.261	4.412*					
SC	-0.152	2.296***			-0.070	1.234					
(CONF*SC)	0.157	2.387**	0.065	5.7	0.263	3.473*	0.088	8.9	<i>H</i> _{8a}	√	√
CENT	-0.163	2.260***			-0.024	0.545					
SC	-0.135	1.924***			-0.070	1.268					
(CENT*SC)	0.149	2.366**	0.062	5.4	0.263	3.361*	0.088	8.9	<i>H</i> _{6a}	√	√
CONF	-0.246	3.378*			-0.268	4.459*					
RA	0.150	2.122***			0.067	1.117					
(CONF*RA)	0.284	3.449*	0.140	13.3	-0.255	3.825*	0.097	9.3	<i>H</i> _{8c}	-	√
REW	0.104	1.805***			0.207	3.064**					
RA	0.184	2.790**			0.102	1.645					
(REW*RA)	-0.210	3.388*	0.094	8.5	0.238	4.250*	0.090	9.0	<i>H</i> _{7b}	-	√
RISK	0.259	3.633*			0.177	2.642**					
RA	0.188	2.809**			0.101	1.657***					
(RISK*RA)	0.291	4.052*	0.144	13.8	0.222	3.363*	0.077	7.6	<i>H</i> ₉	√	√
CONF	-0.236	2.765**			-0.282	4.353*					
SF	0.070	1.320			-0.025	0.574					
(CONF*Sf)	-0.166	2.619**	0.048	4.1	-0.201	3.427*	0.056	5.4	<i>H</i> _{8b}	√	√
CENT	-0.149	2.028***			-0.047	0.902					
SF	0.034	0.683			0.003	0.071					
(CENT*Sf)	-0.163	2.953**	0.043	3.5	0.207	3.064**	0.059	5.7	<i>H</i> _{6b}	-	-
CONF	-0.251	3.426*			-0.291	5.196*					
SP	0.141	2.599**			-0.125	2.179***					
(CONF*SP)	0.300	3.158**	0.131	12.4	0.159	2.059***	0.057	5.6	<i>H</i> _{8d}	√	√
REW	0.107	1.961***			0.265	4.542*					
SP	0.165	3.049**			-0.152	2.477**					
(REW*SP)	0.168	2.661**	0.073	6.5	0.227	3.233*	0.1	10.2	<i>H</i> _{7c}	√	√

* $p < 0.001$; ** $p < 0.01$; *** $p < 0.05$; (one-tailed)

4.3.2.5 Values and Social Axioms

The present study used the construct of social axioms to identify influences of culture on the nomological relationships between market orientation and its antecedents. So far, research attempting to predict the influence of cultural characteristics on business constructs

predominantly relied upon value-based dimensions of culture, such as the classic work of Hofstede (1980a) or Schwartz's value survey (1992). Only recently has the conceptual framework of social axioms, suggested by Leung et al. (2002), found its way into the toolbox of researchers to examine such relationships. So far, the degree to which this instrument predicts attitudes and behaviours over the value-scales is not completely uncovered (Klinger et al., 2004). Both values and social axioms are worthy of study (Bond et al., 2004) and should not be looked at as competing concepts. The social axiom study is a relatively new instrument to measure cultural orientations, and its scientific value in connection with business related concepts has yet to be confirmed. Meaningful relationships between social axioms and values have been found in a number of studies (cf. section *Cultural Context* in the literature review). Since the validity of values is well established, scholars suggest to further strengthen nomological validity and universality of the social axioms by testing them for meaningful linkages with values (e.g. Klinger et al., 2004; Leung et al., 2007). The present study, therefore, follows the suggestion to analyse the links between social axioms and values, in order to support the nomological validity of the social axiom scale.

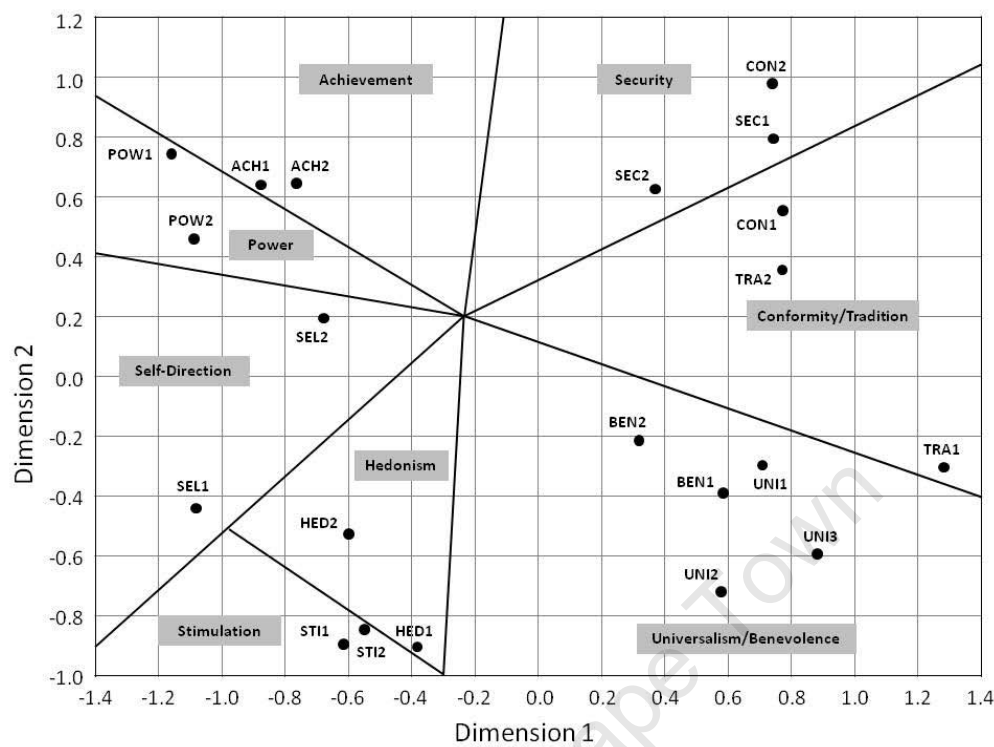
Measurement validation of the PVQ. Due to the composition of the structure of Schwartz's value types and domains on a circumplex continuum rather than in discrete clusters (Schwartz & Bilsky, 1990), multi-group CFA is not suitable to analyse them. As suggested by Schwartz and Bilsky (1990), a Similarity Structure Analysis (Guttman, 1968; Borg & Shye, 1993) was performed in order to verify the theoretical structure of the value types and the four higher-order domains. This nonmetric multidimensional scaling technique measures the distances between the values in a multi-dimensional space, which in turn maps the correlations of perceived similarity ratings. This approach is called configural verification (see Davidson, 1983) and the rationale for applying it in this specific case is described in more detail in Schwartz (1992).

The measures of fit for the solutions of an SSA are indicated by the stress index (Kruskall, 1964) and a coefficient of alienation (Borg & Lingoes, 1987). A value of less than 0.2 for the stress index is generally considered to be acceptable (Kruskall, 1964). The degree of fit between every other variable in an SSA is indicated by the *coefficient of alienation* (Borg & Lingoes, 1987). This stress measurement is achieved through a number of iterations aiming for minimal stress between the dynamic variables. The smaller the coefficient, the better the fit. Generally, a coefficient of alienation smaller than 0.2 represents an adequate fit (Shye, Elizur, & Hoffman, 1994).

SSAs were conducted for the two data sets. The resulting plots can be found in *Figure 8* and *Figure 9*. The SSAs for the South African data set largely revealed the theoretical structure of the ten value types. Deviating from the structure, *stimulation* emerges on the periphery of *hedonism*. Although hypothesized to be adjacent, one dimension is a merged region of value types, including *universalism* and *benevolence*. The same is true for *tradition* and *conformity*, where one additional item of *conformity* emerges in the adjacent region of *security*.

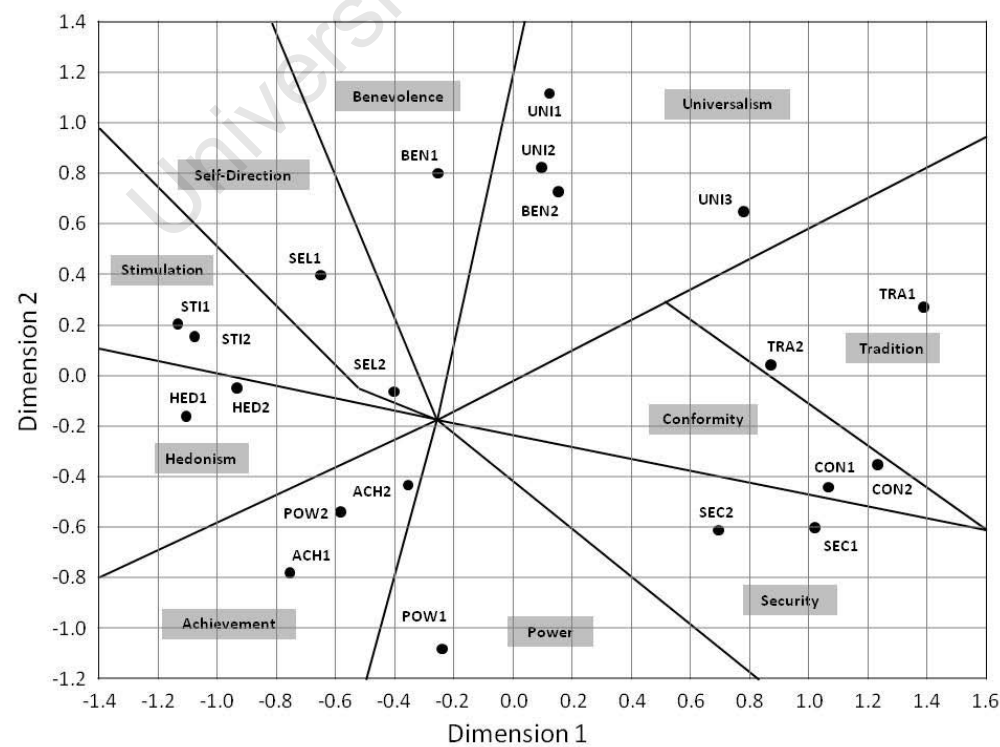
A stress index of 0.155 and a coefficient of alienation equalling 0.179 indicate a reasonable reproduction of the value correlations by the two-dimensional plots.

Figure 8
Two Dimensional SSA^a - Value Types - South Africa



^aN=171

Figure 9
Two Dimensional SSA^a - Value Types - Germany

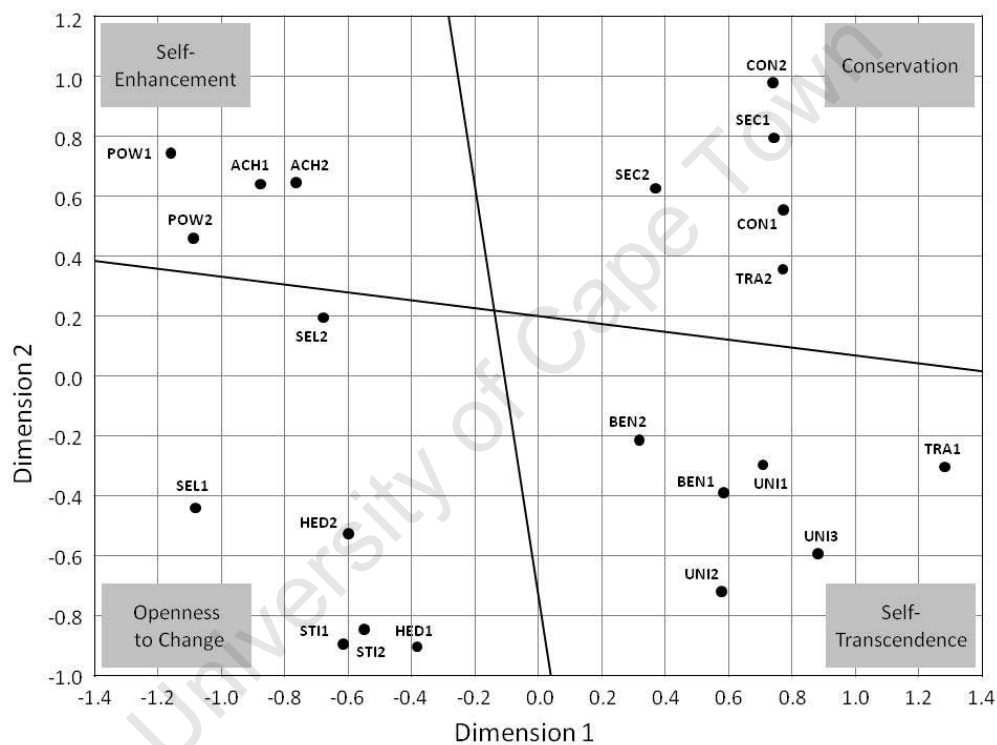


^aN=190

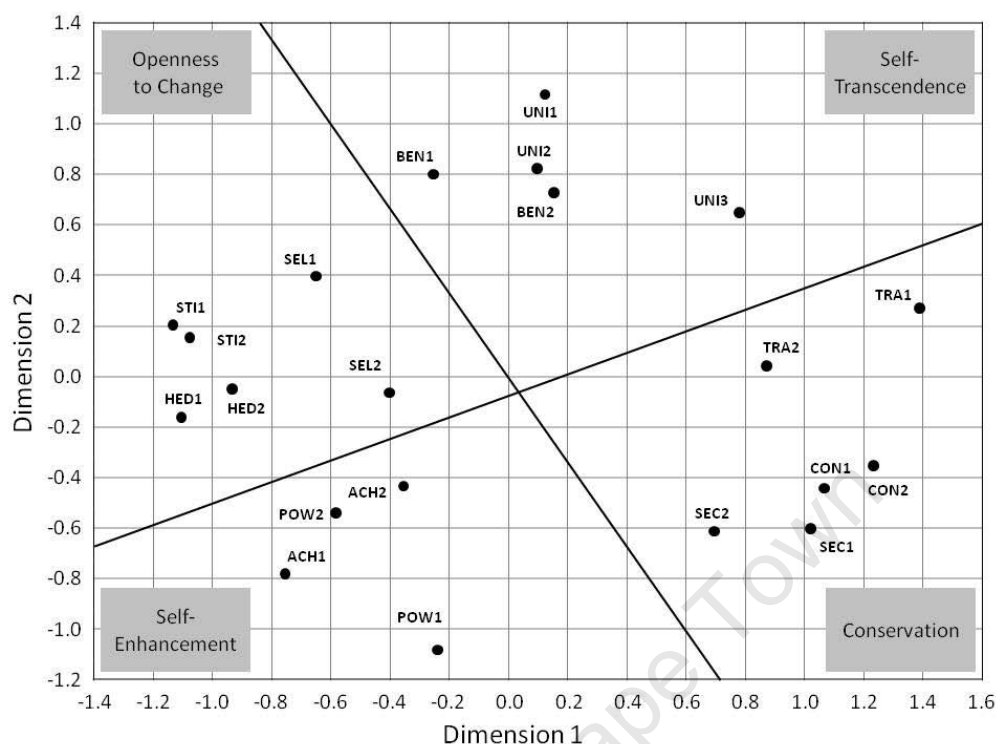
The SSA for the German data reveals a slightly better fit. The theoretical structure of the ten value types emerges with the limitation of two items that are located in adjacent regions, namely one item of *benevolence*, which appears in the region of *universalism*, and one item of *power*, which is closer to *achievement*. The stress index of 0.126 and a coefficient of alienation equalling 0.146 indicate that the data have a reasonable fit to the two-dimensional structure.

Figure 10

Two Dimensional SSA^a - Value Domains – South Africa



^aN=171

Figure 11Two Dimensional SSA^a - Value Domains - Germany^aN=190

Following Schwartz (1992, 2005a) the deviation from the theoretical structure is acceptable since the decisions about where to draw the exact boundaries are arbitrary. According to Schwartz, values form a motivational continuum, and therefore it is inevitable that items that emerge close to the boundaries of adjacent value types or domains somewhat overlap in meaning. Therefore, intermixing items from adjacent value types can emerge in some samples.

Consistent with theory, the four higher order value domains, including *self-enhancement*, *openness to change*, *conservation*, and *self-transcendence* clearly emerge in both the South African and the German sample, as displayed in *Figures 10* and *Figure 11*. It is interesting to note that in both cases the value type *hedonism* is more closely related to *openness to change* than to the adjacent domain *self-enhancement*.

Schwartz's (1992) four value domains can further be simplified by creating a two-dimensional structure including *openness versus conservation* and *self-transcendence versus enhancement*. In order to plot individual value scores on these two bipolar dimensions, the scores of each conceptually opposed pair of higher-order values must be subtracted from the other. Although simplifying analyses, this step will not be executed, since it would lead to a loss of substantial, meaningful information on the individual value priorities.

Multivariate measures. Indexes of the importance of the ten value types were obtained by averaging the rating for the items within each value type. Following Schwartz (1992), this procedure ensures that all values are weighted equally within a particular value type.

The importance of the four value domains was derived by averaging the importance attributed to each of the value types within a specific domain. Following an approach applied by Steenkamp and Burgess (2002) the value type *hedonism* was not included in the computation of the importance of value domains, since it is related to both *openness to change* and *self-enhancement* (Schwartz, 1992).

Table 27

Correlation Matrix - Value Types and Social Axioms

Pearson Correlations ^{ab}								
	SC		RA		SF		SP	
	South Africa ^c	Germany ^d	South Africa ^c	Germany ^d	South Africa ^c	Germany ^d	South Africa ^c	Germany ^d
POW	-0.004 (0.957)	-0.002 (0.982)	0.027 (0.728)	-0.022 (0.762)	0.069 (0.371)	0.154* (0.035)	-0.257** (0.001)	-0.117 (0.107)
ACH	-0.065 (0.401)	-0.139 (0.056)	0.011 (0.882)	0.090 (0.218)	0.076 (0.322)	0.194** (0.007)	-0.262** (0.001)	-0.156* (0.032)
HED	-0.218** (0.004)	-0.229** (0.002)	-0.084 (0.274)	-0.169* (0.020)	0.106 (0.167)	0.028 (0.705)	-0.132 (0.086)	-0.250** (0.001)
STI	-0.058 (0.456)	-0.218** (0.003)	0.013 (0.871)	-0.062 (0.397)	0.021 (0.786)	0.127 (0.081)	-0.015 (0.848)	-0.300** (0.000)
SEL	0.103 (0.180)	-0.056 (0.446)	-0.148 (0.054)	0.089 (0.224)	0.126 (0.102)	0.224** (0.002)	-0.255** (0.001)	-0.128 (0.078)
UNI	-0.077 (0.316)	0.038 (0.607)	0.073 (0.343)	0.060 (0.409)	-0.149 (0.052)	-0.025 (0.733)	0.063 (0.414)	0.231** (0.001)
BEN	0.027 (0.725)	0.017 (0.815)	0.073 (0.347)	0.000 (0.999)	-0.042 (0.587)	-0.057 (0.438)	0.266** (0.000)	0.136 (0.062)
TRA	0.160* (0.037)	0.079 (0.281)	0.093 (0.226)	0.027 (0.716)	-0.064 (0.410)	-0.210** (0.004)	0.317** (0.000)	0.319** (0.000)
CON	0.017 (0.830)	0.154* (0.035)	-0.031 (0.688)	0.027 (0.712)	-0.177* (0.021)	-0.233** (0.001)	0.100 (0.195)	0.218** (0.003)
SEC	0.141 (0.066)	0.348** (0.000)	-0.020 (0.791)	-0.006 (0.930)	0.042 (0.585)	-0.121 (0.097)	0.194* (0.011)	0.047 (0.522)

^a Significance levels in parantheses; ^b controlled for use of scale bias; ^c N=171; ^d N=190

** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis. The magnitudes and directions of associations between the ten value types and the four social axioms were calculated using Pearson (r) correlations. In order to control for the problem of individual differences in response styles (see Schwartz, 1992; Leung & Bond, 1989), the approach suggested by Schwartz (2007) was followed. Therefore, an additional variable was introduced, composed of each individual's total score on all value items, divided by the total number of items in the scale. The correlation matrix was calculated using partial correlations between values and social axioms controlling for scale use. According to Schwartz (2007), this technique yields virtually identical results to the method of centring each individual value score. This technique was not applied to social axioms,

since, according to Leung et al. (2007), it is still unclear whether a comprehensive set of axioms has been identified.

The theory holds that the ten values form a circular structure of motivationally opposed and compatible values. Therefore, it should be possible to relate all ten values to other variables in a structured manner. In more detail, similar correlations should emerge between adjacent values and other variables, and the degree of correlation should decrease monotonically the further around the circle it lays from the highest correlation (Schwartz, 1992).

Correlations between social axioms and the ten value types, as found in the samples from South Africa and Germany, are reported in *Table 27*. A number of significant associations between value types and social axioms were found. Correlations were generally not very strong. The strongest links between social axioms and values were 0.32 for the South African sample and 0.35 for the German sample. Associations between social axioms and the four value domains are reported in *Table 28*.

The social axiom dimension *social cynicism* was negatively related to *openness to change* values in the German data set, and positively to *conservation* values in both samples. *Reward for application* did not show any correlations with the four value domains. The same applies to *social flexibility*, which did not show any significant correlations with value domains in the South African sample. However, in the German sample, *social flexibility* was positively related to both *self enhancement* and *openness to change* values, as well as showing a negative relationship with *conservation*. In both samples, *religiosity* showed correlations to all four value domains. Consistently, *religiosity* was negatively related to *self-enhancement* and *openness to change* values, as well as positively related to *self-transcendence* and values of the *conservation* domain. The highest correlation between values and beliefs in both the South African and the German set was -0.3.

A number of results from the analysis of value types, as well as domains and the social axioms, correspond with the predicted and observed correlations in Leung et al. (2007)⁹⁰. Even though Leung et al. (2007) hypothesized a number of relationships between *reward for application* and Schwartz's values, only the negative correlation with *hedonism* was supported by the German data. Similarly, Leung et al.'s observed relationships between *social flexibility* and *self-direction*, as well as with *tradition*, were only found in the German data set. Contrary to Leung et al. (2007), who did not observe a hypothesized negative correlation between *social flexibility* and *conformity*, the analysis of both South African and German data revealed this relationship. The most significant overlapping with previous findings was observed regarding the last social axiom. *Religiosity* showed meaningful relationships with value types and domains as reported in Leung et al. (2007) and Bond et al. (2004). All hypothesized correlations between *religiosity* and Schwartz's value types were at least significant in one of the samples. As predicted, the social axiom positively correlates with *tradition*, *conformity* and *benevolence*. In addition, positive relationships were found with *universalism* in the German data, as well as with *security* in the South African sample. Negative correlations could be observed between *religiosity* and the remaining value types *power*, *achievement*, *hedonism*, *stimulation*, and *self-direction*. This is not surprising since previous research found *religiosity* interwoven with values (e.g. Rokeach, 1969; Schwartz & Huismans, 1995).

⁹⁰ For the associated hypotheses, as well as for detailed interpretations of the observed relationships, see Leung et al. (2007).

Table 28

Correlation Matrix – Value Domains and Social Axioms

Pearson Correlations ^{ab}								
	SC		RA		SF		SP	
	South Africa ^c	Germany ^d	South Africa ^c	Germany ^d	South Africa ^c	Germany ^d	South Africa ^c	Germany ^d
Self-enhancement	-0.042 (0.583)	-0.085 (0.245)	0.021 (0.781)	0.042 (0.570)	0.084 (0.274)	0.207** (0.004)	-0.300** (0.000)	-0.163* (0.025)
Openness to change	0.018 (0.814)	-0.197** (0.007)	-0.075 (0.333)	0.001 (0.990)	0.086 (0.267)	0.219** (0.002)	-0.154* (0.045)	-0.299** (0.000)
Self-transcendence	-0.039 (0.618)	0.038 (0.607)	0.089 (0.247)	0.047 (0.518)	-0.125 (0.104)	-0.047 (0.524)	0.186* (0.015)	0.245** (0.001)
Conservation	0.153* (0.046)	0.253** (0.000)	0.020 (0.799)	0.021 (0.777)	-0.100 (0.192)	-0.246** (0.001)	0.297** (0.000)	0.253** (0.000)

^a Significance levels in parantheses; ^b controlled for use of scale bias; ^c N=171; ^d N=190

** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

The results are consistent with previous findings in that the overlap between social axioms and Schwartz's values is small, and therefore they are different domains of discourse (cf. Bond et al., 2004; Leung et al., 2007). This is consistent with the findings that values are related to a number of preferences and behaviours, but these relationships are usually only weak (e.g. Bardi & Schwartz, 2003). Therefore, social axioms provide additional insight and help to understand preferences, judgements and behaviours (cf. Leung et al., 2007). More importantly, these meaningful relationships with values, which are similar across the samples studied, support the validity of the social axiom dimensions.

5 DISCUSSION OF RESULTS

In this dissertation, the nomological network of market orientation and a number of its antecedents, as well as consequences, were examined. Particular attention was laid on influences by individual culture. Based on the findings from an extensive literature review of the two main topics, a model was developed and a set of hypotheses was derived.

With the help of a two-country study incorporating members of the South African and German automotive industries, primary data was collected. Using these data, the proposed model was tested and found valid. The results of this investigation formed the core part of the previous section.

Substantively, the results provide evidence on the impact of cultural institutions on the market orientation construct. The results confirmed the general model of market orientation and its antecedents. The interacting effects of social axioms with the market orientation construct are meaningful and theoretically predictable.

The results have important theoretical and practical implications. Theoretically, the present study suggests that methodological issues, the cultural context, and the environmental context need to be considered when analysing market orientation and its antecedents. The practical implications refer to the interaction of individual cultural characteristics of members of an organization with the level of market orientation and hence with the performance of an organization.

In the following, conclusions about the findings and their implications for theory and practice will be drawn. Limitations of the research will be discussed and an outlook on research questions resulting from the present work will be given.

5.1 Conclusions about Hypotheses and the Overall Research Problem

After analysing the two data sets from the South African and German field research, the hypothesized relationships between the separate institutions of the market orientation construct, as well as the interaction effects of the individual-level cultural dimensions of the social axioms on the construct were tested. Using the SEM technique of latent variable PLS, the direct as well as the interaction effects were tested, investigating a number of models.

Table 29 gives an overview of the tested hypotheses and their results.

Table 29

Hypothesis Tests and Results

Hypothesized relationships	Label	Observed direction of effect		Results of test Hypothesis
		South Africa	Germany	
Centralization -> Market Orientation ^a	H_1	Negative	Insignificant	Accepted
Social Cynicism as moderator ^b	H_{6a}	Positive	Positive	Accepted
Social Flexibility as moderator ^b	H_{6b}	Negative	Positive	Rejected
Reward Systems -> Market Orientation ^a	H_2	Positive	Positive	Accepted
Social Cynicism as moderator ^b	H_{7a}	Insignificant	Positive	Accepted
Reward for Application as moderator ^b	H_{7b}	Negative	Positive	Partly Accepted
Religiosity as moderator ^b	H_{7c}	Positive	Positive	Accepted
Interdepartmental Conflict -> Market Orientation ^a	H_3	Negative	Negative	Accepted
Social Cynicism as moderator ^b	H_{8a}	Positive	Positive	Accepted
Social Flexibility as moderator ^b	H_{8b}	Negative	Negative	Accepted
Reward for Application as moderator ^b	H_{8c}	Positive	Negative	Partly Accepted
Religiosity as moderator ^b	H_{8d}	Positive	Positive	Accepted
Willingness to Take Risks -> Market Orientation ^a	H_4	Positive	Positive	Accepted
Reward for Application as moderator ^b	H_9	Positive	Positive	Accepted
Market Orientation -> Business Performance ^a	H_5	Positive	Positive	Accepted

^a Direct effect between variables

^b Interaction effect

Of the hypothesized direct effects of the antecedents of market orientation on market orientation, all but one confirmed the initial model. The only case with an insignificant test result was the centralization-market orientation relationship. The test of the German data did not provide the predicted result. However, although the effect of centralization on market orientation could not be confirmed in the German data set, it leaned toward the same direction as in the South African data set. Therefore, the appending hypothesis was also accepted. The effect might be confirmed in future research.

Not surprisingly, market orientation positively affected all three measures of business performance, which led to the acceptance of the relevant hypothesis. The results also confirm the initial assumption that contingency effects on the nomological relationships of the market orientation construct, as found in other studies in the EM context, are not present in the case of the South African automotive industry. The significant foreign influence on the industry members seems to nullify the effects of characteristics such as high cultural hierarchy or embeddedness on the tested relationships.

In summary, the data from the South African as well as from the German survey confirmed the positive effects of *reward systems* and the *willingness to take risks* on the market orientation of the relevant organizations. Both *centralization* and *interdepartmental conflict* lead to a reduction of the level of market orientation. Lastly, the level of market orientation is directly linked to the organization's business performance.

The described findings are consistent with the majority of findings in literature (see Cano et al., 2004 and Kirca et al., 2005 for meta analyses), which was an important precondition in order to correctly interpret the observed interaction effects of the social axioms.

After setting the necessary test environment by confirming the direct effects of the antecedents of market orientation on market orientation, the core hypotheses of this dissertation could be tested. Ten interaction effects of individual level social axioms on the above described relationships were tested using the data from the two-country study.

The first relationship tested for moderating effects of social axioms was centralization on market orientation. Two social axioms were hypothesized to interact with the relationship, namely *social cynicism* and *social flexibility*. The analysis revealed that *social cynicism* reduced the negative effect of centralization on market orientation in both the South African and German data sets. *Social flexibility*, on the other hand, was hypothesized to interact in the opposite way on the centralization-market orientation link. The findings, however, were not clear enough to support the effect. Even though the South African and German data showed opposing effects, the results were not distinct enough to generate an alternative explanation.

The next relationship affected by social axioms was the rewards systems-market orientation link. As hypothesized, tests confirmed that the social axiom *social cynicism* supports the discovered relationship. However, the support was less pronounced for the South African sample than for the German sample. Nevertheless, the findings supported the hypothesized strengthening of the relationship between market-based reward systems and market orientation. The moderating effect of the social axiom *reward for application* was strongly supported by literature. It was surprising that the positive interaction effect was only observed in the German data set. A similarly distinct but opposing effect was discovered when analysing the South African data. Therefore, the respective hypotheses could only be partly accepted, and the effect will need to be tested in additional environments to make reliable conclusions about its direction. Research in EMs presents boundary conditions on the theorized relations. Future research will have to examine these carefully in order to fully understand the present result. The results of testing the moderating effect of the social axiom

religiosity give evidence of its existence in both data sets. The tests support the strengthening effect of the social axiom on the reward systems-market orientation relationship.

All four social axioms included in the present study were tested for interaction effects on the interdepartmental conflict-market orientation link. Both *social cynicism* and *religiosity* performed in the hypothesized direction, weakening the effect of the independent on the dependent variable. For the two social axioms *social flexibility* and *reward for application* a support of the direct effect was hypothesized. While the interaction effect of *social flexibility* was present in both samples, *reward for application* behaved differently in the South African sample, weakening the direct effect. Therefore, only the German sample supported the hypothesis. Again, boundary conditions of the EM environment could be responsible for this and additional research on the effect is necessary to understand the results fully.

The last moderator relationship discovered was *reward for application* on the willingness to take risks-market orientation link. Both data sets confirmed the strengthening effect of the moderator variable leading to the acceptance of the associated hypothesis.

In general, results were very consistent across the samples in the two countries. Support was found for the hypothesized interaction effects of social axioms with the construct of market orientation. Meaningful and theoretically predictable nomological relations were obtained. In total, seven of the hypothesized interaction effects were supported by the data; two were partly supported and need further investigation and one effect could not be confirmed.

In some cases, effect sizes and calculated explained variances of the tested relationships were somewhat low. Nevertheless, the findings are still considered to be theoretically and practically important and contribute in a meaningful way to answering the research questions (cf. Cohen, 1988; Cooper, 1981; Peterson, Albaum & Beltrami, 1985).

Looking at the findings from a cultural axiom point of view, the following can be concluded: the social axiom *social cynicism* interacts with the tested antecedents of market orientation in a way that is in favour of the level of market orientation. The relationships between the three antecedents of market orientation and market orientation are either strengthened, or their negative influence is reduced with the introduction of *social cynicism* as a moderator. *Religiosity* also positively interacts with the level of market orientation by strengthening the positive direct effect and weakening the negative direct effect of the independent on the dependent variable.

The social axiom *social flexibility* on the other hand countervails higher levels of market orientation by strengthening the negative effect of *interdepartmental conflict* on market orientation.

Contradicting signs were observed originating from *reward for application*. On the one hand, the social axiom strengthens the positive relationship between the *willingness to take risks* and market orientation, and is therefore supportive of higher levels of market orientation. On the other hand, its influence on the relationship between two other antecedents of market orientation, namely *interdepartmental conflict* and *reward systems* and market orientation are inconclusive considering both samples. Therefore, a distinct conclusion is not possible here.

After reviewing the tested direct and interaction effects, it becomes evident that individual level social axioms influence the relationships between the antecedents of market orientation and market orientation in various ways. This finding is in concert with the core assumption that led to the development of the present dissertation. The ways in which the tests of the hypothesized relationships can be interpreted in terms of the underlying research problem are outlined next.

The overall goal of this dissertation was to find out how cultural institutions affect the market orientation construct. A number of antecedents influence the level of market orientation within an organization. These antecedents are a given by the company and are only moderately affected by the individual employee. Centralization, interdepartmental conflict, the willingness to take risks, as well as reward systems within a company are characteristics of an organization that employees are faced with on a daily basis. These top management factors, interdepartmental factors and organizational systems are coined by the institutional context such as the organization's management, corporate culture, or operating environment and do not change rapidly. The level of market orientation, on the other hand, has proven positive effects on organizational performance. Previous research found that culture interacts with the described market orientation-performance link.

The objective of the present study, however, was to test whether culture had additional effects on the construct. More precisely, it was hypothesized that individual culture interacts with the links between market orientation and its antecedents. Therefore, it was necessary to reproduce an existing model outlining the relationships between market orientation, its antecedents and consequences, in order to provide an established testing ground for the influences of culture on the construct. In order to investigate the research question, a two-country study, incorporating companies of the South African and German automotive sector, was developed and carried out.

The hypothesized interaction of individual culture operationalized by social axioms on the relationships between the antecedents of market orientation and the level of market orientation was substantiated in both samples. Individual cultural characteristics of employees of the participating companies influenced the link between the antecedents and the market orientation. More specifically, it was found that the link between the antecedents of market orientation and the level of market orientation is influenced by non-goal-directed, general

beliefs (viz. social axioms) of the employees of said organizations. Social axioms of employees interacted with the positive and negative effects of interdepartmental conflict, centralization, reward systems, as well as the willingness to take risks on the level of market orientation, as outlined in the previous section. Therefore the research objective has been achieved in that possible effects between culture and the market orientation construct have been tested and uncovered.

The findings have important implications on existing theory and praxis. These contributions will be discussed in the next section.

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5.2 Implications for Theory and Praxis

With respect to the body of knowledge in the fields of marketing and social psychology, this study makes a number of interdisciplinary contributions that are relevant to both theory and praxis. In order to extend existing knowledge and generate additional insight in the discipline of marketing research, constructs of a second field of study, individual culture, have been utilized.

Existing literature on the institutional context, the cultural context, as well as the organizational context, was reviewed and discussed. This led to the theoretical derivation of meaningful theses about the relationships between culture and the market orientation construct, one of the most prominent topics in scholarly marketing research.

A new basic psychological construct that explains differences in social behaviours and variations, namely social axioms (Leung et al., 2002), was used to measure the context-free beliefs of employees of an industry sector and relate these to the construct of market orientation. This in itself is an important contribution to existing procedural methods since, to the best of the researcher's knowledge social axioms have not been related to market orientation before. All previous research on the effects of culture on the organizational context relied on values such as Hofstede's (1980) work-related values (e.g. Nakata & Sivakumar, 2001) or Schwartz's (1992) Value Survey (see Kirca et al., 2005), which consists of basic types of values. Values are conceptualized as generalized beliefs that refer to trans-situational goals in life (Schwartz et al., 2001). Although values remain the most important measure of culture, not all behaviour is goal-oriented (e.g. Locke & Latham, 2004). Operationalizing culture using general, context-free beliefs facilitated the assessment of relationships that cannot be explained by values. The social axiom survey presents a completely new approach for conducting cultural research on market orientation.

So far, the degree to which social axioms predict attitudes and behaviours over the value-scales has not been completely uncovered. Therefore, combining social axioms with Schwartz's (1992) well-established measure of individual value types and domains supported the nomological validity of the social axiom scale by detecting meaningful nomological relationships between the two constructs. The findings were in line with previous studies (e.g. Leung et al., 2007) and therefore contribute to establishing the social axiom scale in new research environments, namely the South African and German manufacturing sector.

The second theoretical model that finds support in a new research environment is the market orientation construct. Confirming the relationships between antecedents of market orientation and market orientation (e.g. Narver & Slater, 1990; Jaworski & Kohli, 1993) in both a HIC and an EM, contributes to the robustness of the construct. Most of this important stream of research originates from HICs. This suggests a significant limitation because institutional context is a central influence on market orientation and cultural, socioeconomic, and regulative institutions in EMs and HICs differ considerably (Burgess & Steenkamp, 2006).

Many multinationals have already discovered the potential EMs present. Countries such as South Africa, Mexico, Brazil, China, India, and Russia offer high economic growth rates, thereby awakening interest from successful global and local companies. Unique business opportunities present themselves not only in their level and growth in GDP - an important characteristic of EMs - but also in other 'change' variables, such as their growing regulation of the competitive environment, as well as the evolving demands and expectations on the consumer side. EMs represent attractive markets for appropriate products and sources of new competition. An increasing number of companies have become aware of this and have started penetrating the new markets.

From a marketing point of view, EMs are very important environments in which to learn about boundary conditions and develop alternative business models and theories. The

present study contributes to this by examining market orientation, its antecedents and consequences, such as performance in an EM and comparing it to the results of a HIC. While considering distinctive common characteristics of the EM and HIC institutional context, in particular individual culture, the study found that market orientation theory generalized to this EM context insofar as the proposed market orientation construct could be confirmed. Equally important, the study suggests boundary conditions particular to the EM environment.

Conversely to the hypothesized effects, some social axioms did not allow the generalizability of market orientation theory with respect to the theoretically expected relations in EMs. The analysis of *social flexibility*, for instance, did not yield the expected information and a further investigation into its influence on the market orientation construct is necessary. The positive effect of *reward for application* on reward systems was strongly supported by literature, but surprisingly had the inverse effect in the EM environment. The same is true for this social axiom's moderating effect on the interdepartmental conflict–market orientation relationship.

These results help to proceed toward a contingency theory on market orientation in EMs. The institutional context of the relevant EM shapes employee preferences when engaging in market-oriented behaviours, thereby proposing boundary conditions for market orientation literature in such environments. In addition to socio-economic and regulative pillars, the finding of this study suggest that culture as an institution has an impact on the market orientation construct and that this impact can differ for HICs and EMs. With this knowledge at hand, multinationals with production facilities or subsidiaries in EMs must adapt inter- and intra-organizational factors. Attention should be given to individual cultural characteristics distinctive to EMs.

To utilize the knowledge about the effects of culture on the organization, it is vital to make managers and employees aware of it and disseminate the information across the whole company. Only in this way will the full benefit of the knowledge be exploited. Moreover, it is

reasonable to expect that the observed moderation effects of the social axioms on the market orientation construct will also influence other inter- and intra-organizational factors than those researched in this study. This is an important consideration for the development of market oriented strategies and should be focused on in future research.

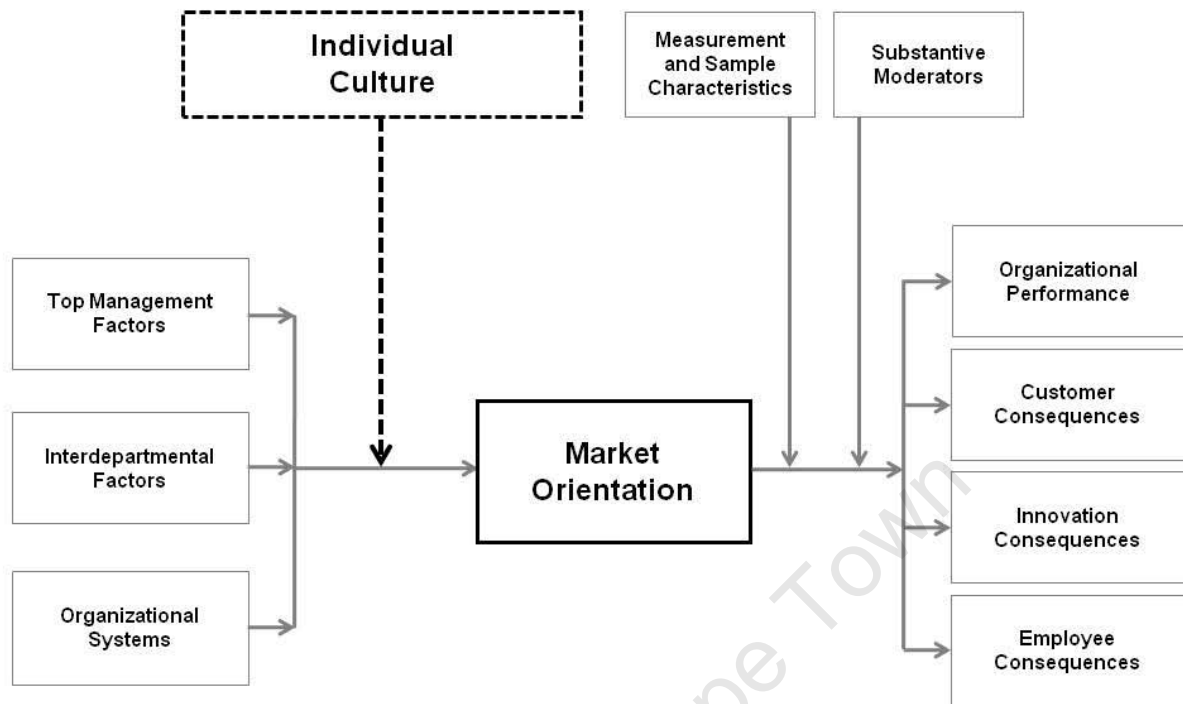
Furthermore, combining the set of measurement tools in the highly competitive automotive sector had not been done before. The same applies to the direct positive effect of market orientation on business performance that was confirmed in companies of the South African automotive industry.

The most important consequence of the findings of this research, and therefore the primary contribution, is the extension of the market orientation construct. Nakata and Sivakumar (2001) examined the influences of national culture on the interpretation, adoption and implementation of the marketing concept using Hofstede's (1980) and Bond et al.'s (1987) cultural factors. In their meta-analysis of research on market orientation, its antecedents as well as consequences, Kirca et al.'s (2005) conceptual framework contained the cultural context as influencing factor of the market orientation-performance link. The same applies to Cano et al. (2004) who, however, were not able to detect these hypothesized effects. Prior studies reporting effects of culture on market orientation typically infer culture or rely on secondary data. In contrast, the present study simultaneously collected data on both the market orientation construct and on cultural characteristics of the same persons at the same time, using a reliable instrument, thus allowing direct comparison of the constructs.

The present study adopted and reproduced part of Kirca et al.'s (2005) model using data from the South African and German automotive sector. It then introduced culture as moderator of the link between market orientation and its antecedents. The simplified model, including the contribution made by the present research (represented by the dotted line), is depicted in *Figure 12*.

Figure 12

Extended (Simplified) Model of Market Orientation



Adapted from Kirca et al. (2005, p. 26) and Deshpandé (1999, p. 106).

Introducing a measure of individual culture into Narver and Slater's (1990) and Jaworski and Kohli's (1993) conceptualization of the relationships between market orientation and its antecedents, in order to explain variations in the strengths of these associations represents a step towards a better understanding of the construct. Studying these effects on a cross-cultural sample including both a HIC and an EM contributes to the external validity and generalizability of the findings (cf. Burgess & Steenkamp, 2006; Hult, Ketchen, Jr, Griffith, Finnegan, Conzalez-Padron, et al., 2008) by investigating boundary conditions.

Said boundary conditions led to a number of unexpected results. Most of the interacting effects found are meaningful, theoretically interpretable and point towards the generalizability of the model across markets. As expected and theorized the social axiom *social cynicism* interacts favourable with the tested antecedents of market orientation, supporting a higher level of market orientation. The same applies to *religiosity*. Also well

explainable by literature is the negative influence of *social flexibility* on the level of market orientation. *Reward for application*, on the other hand provides contradicting and difficult interpretable results. The social axiom strengthens the positive relationship between the willingness to take risks and market orientation in both the HIC and EM context, and is therefore supportive of higher levels of market orientation. However, whereas in the HIC the positive effect of *reward for application* on market orientation can be observed for two more antecedents (reward systems and interdepartmental conflict), the same antecedents are negatively influenced by *reward for application* in the EM context. This inconclusiveness might be a result of other cultural peculiarities characteristic of EMs. The way individuals interact with others is in line with how they define themselves (Burgess & Steenkamp, 2006). Relational identities are often expressed in their connectedness with social networks (Brewer & Brown, 1998). EMs emphasize cultural embeddedness and hierarchy (Schwarz, 2004c). Emphasizing embeddedness leads to a strong focus on collective groups. Individuals are viewed as entities of the group and strive for meaning in life through identification and pursuing group goals. It is the goal of cultures high on embeddedness to maintain in-group solidarity and opposing behaviours are discouraged. Research has reported consistent positive relations between reward systems and market orientation in cultures high on embeddedness (e.g. Burgess & Nyajeka, 2005; Huddleston & Good, 1999). As discussed before there is a strong influence of the Western business practice on the South African automotive industry. Individual rewards as practiced in most Western organizational reward systems might be against the fundamental position of embeddedness. Even though there is a cultural basis for rewards in EMs, reward systems as defined in the present study do not apply to group rewards and therefore do not show the expected positive effects on market orientation. Cultures emphasizing hierarchy accept and legitimize the unequal distribution of power. Hierarchical systems within the society are taken for granted and rules and obligations that come with the hierarchy are complied with. This also applies to working relations. Centralized structures

with a strong chain of authority do not allow for conflicts within the hierarchy. Cultural preferences for order and hierarchical coordination in working relations suggest that higher levels of conflict may have a stronger negative effect on organizational structures and processes in EMs. Interdepartmental conflicts are being avoided but if they arise their negative influence on market orientation gets aggravated.

Market orientation benefits from both hierarchy and embeddedness (Nakata & Sivakumar, 2001). However, the present findings show that it is necessary to systematically explore the influence of the EM institutional context and its effects on the market orientation construct and that interactions within the organization must be appropriately designed so that they enhance its implementation.

In addition to the primary contributions, the present study generated a number of secondary implications. As previously outlined, some of the scales used in the primary research were applied in new research environments. The two countries in which the automotive sector was studied differ a lot in terms of cultural and socio-economic characteristics. Therefore, prior to the study, it was not clear whether all instruments would perform well in these settings. Emerging markets, in particular, posed a problem to some scales.

Several studies have reported problems with scales that used negatively worded items (see Baumgartner & Steenkamp, 2001; Steenkamp & Burgess, 2002; Wong et al., 2003). This effect was also observed in the present study, adding to the list of evidence for the problem. To date, the exact background for this observation is still unclear (Burgess & Steenkamp, 2006).

In addition to supporting the nomological validity of the social axiom scale by providing evidence of meaningful relationships with other established constructs, such as

Schwartz's (1992) values, Jaworski and Kohli's (1993) antecedents of market orientation, as well as Ruckert's (1992) market orientation scale, the present study supported another finding related to the SAS. Consistent with literature that identified problems of the social axiom *fate control*, a cognitive coping response to varying levels of negative outcomes (Bond et al., 2004), in non-Asian research environments for example (e.g. Klinger et al., 2004; Leung et al., 2007; Leung et al., 2002), the present study detected the same effect.

Following the theoretical implications based on the results of the present research, a number of practical issues will be outlined. In addition to contributing to the field of market orientation by supporting and broadening existing theories, the findings resulting from the present study also have important practical implications. In the following, the core management implications will be summarized.

The results from analysing the relationships between market orientation and its antecedents are important indicators for managers, pointing to which organizational factors are supportive of a high level of market orientation and which negatively affect the company's intelligence generation, dissemination, and responsiveness. The level of market orientation is directly linked to an organization's performance. Therefore pursuing a market oriented strategy is in the interest of managers and employees alike, since it leads to a better performance. Particularly for manufacturing companies in EMs, very little proof of the transferability of findings from HICs exists. The results from the present study suggest that adopting appropriate levels of risk-taking and the introduction of market-based reward systems positively affects the level of market orientation. On the other hand, high levels of centralization, as well as interdepartmental conflicts, negatively influence a market orientation. The present study supports this nomological framework for companies of the automotive sector in a country classified as an EM. The same applies to the positive effect of

market orientation on a company's performance. The findings reinforce the adoption of a market orientation in manufacturing companies in EMs in order to boost performance.

The second important implication for manufacturing companies in HICs and EMs alike is the impact of cultural characteristics on afore described relationships between market orientation and its antecedents. Social axioms can easily be measured and provide diagnostic information that managers and operational staff can relate to marketing practice and intra-organizational behaviour, thereby improving market orientation and performance.

In summary, four individual characteristics measured by social axioms were found to moderate the effects of antecedents of market orientation on the level of market orientation, and hence are indirectly affecting the company's performance. While some of the moderating effects are supportive of the level of market orientation, others mitigate positive effects or even work against the adoption of a market orientation by strengthening negative effects. With this knowledge at hand, managers can and should anticipate individual, culture based effects on the market orientation framework and use them to maximize positive outcomes. One way to do this could be the development of strategies in order to position employees within an organizational structure, fostering positive effects that their cultural characteristics might have on the market orientation. Similarly, positioning people with a certain cultural profile in areas where their social axiom levels could negatively affect the market orientation should be avoided. Incorporating this knowledge about the effects of social axioms on the antecedent-market orientation link could already take place at a human resources management level by profiling applicants prior to hiring. Alternatively, managers and workers can be trained to recognize the social axioms they endorse and how their beliefs affect the company's market orientation and ultimately the success of their company.

In summary, the knowledge generated about the moderating effects of social axioms on the nomological framework of market orientation offers a new view on the interrelations between employees and the factors that lead to a successful business praxis.

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5.3 Limitations & Implications for Further Research

The current research is subject to several limitations, which are suggestive of future research opportunities. The limitations of the present research are discussed in this section and provide some guidance about the implications for future research.

The cross-sectional design of the research is an important limitation (Bowen & Wiersema, 1999). Causal relationships may only be inferred from cross-sectional data and the design assumes that parameters are stable over time. In the present research, this limitation refers to the conclusions drawn about all of the hypothesized relations. Notwithstanding this limitation, several longitudinal, multinational research projects into culture have demonstrated the long-term stability of the construct, such as the World Value Survey (Inglehart & Welzel, 2005; Schwarz, 2006). In fact, some scholars continue to promote the use of the well-known national cultural scores of Hofstede, which were collected among IBM employees in the 1960s (Soares, Farhangmehr, & Shoham, 2007). This suggests an interesting opportunity for longitudinal research into the effects of social axioms on market orientation theory. A good example of this type of research is provided by Gebhardt, Carpenter, and Sherry (2006), whose innovative study uses grounded theory to study the adoption and implementation of market orientation in the firm. Case study analysis of a limited number of organizations over time using other methods also would be welcome.

A major issue in international research concerns the comparison of 'like with like'. An important question in this regard concerns the comparability of the South African and German samples in the present research due to the inability to recruit large German firms. Are these national samples comparable given the exclusion of the largest automotive manufacturers? Is this a limitation in the current research?

Several lines of reasoning suggest that excluding a handful of large, German automotive manufacturers in the present research may not present a serious limitation. First,

many scholars observe that matched samples often are very difficult or “impossible in practice” to achieve (e.g. Collinson & Pettigrew, 2009, p.778). In fact, many studies feature industry definitions that are much less precise than the industry definition employed in the present research. In this vein, the major journals in IB, marketing and strategy are replete with studies in which industries are defined much more broadly, and in which the possibility of lower comparability seems far more likely, than the industry defined in the present research. The current research contributes more generally to the structure-content-performance literature. As Hoskisson and his colleagues recently observed, major contributions to that literature by Hunt, Newell, Porter and others have focused on industries such as “consumer goods companies” and diverse groups of companies such as “producer goods industries that all relate to chemical industries” (Hoskisson, Hitt, Wan, & Yiu, 1999). Thus, in comparison to many studies published in highly cited, scholarly, peer-reviewed journals, the comparability of the samples does not seem unreasonable.

Another line of reasoning concerns the concept of the strategic group. In the strategic marketing literature, distinction is made between industry and strategic group influences on performance (Short, Ketchen Jr., Palmer, & Hult, 2007). *Strategic groups* are firms within an industry that are relatively homogeneous in their actions and follow the same or similar strategies (Porter, 1979). These subsets of companies occur naturally among industry participants and are the subject of considerable research (Cool & Schendel, 1987, 1988). Recent research finds strategic groups to be moderately stable and predictable over time, due in part to the mobility barriers that limit movement between groups (Short, et al., 2007). The strategic group concept has relevance to the comparability of the samples in the current research because participants in both samples are members of strategic groups in the automotive manufacturer industry. This can be observed in the close working relations of automotive manufacturers and automotive component manufacturers in both countries, who typically work closely as a team with other members of their strategic group to achieve

common goals. Strategic group members face high mobility barriers. For example, the high fixed investment in dedicated plant and equipment, high retooling costs, interwoven information technology systems and logistics infrastructure make switching strategic groups very difficult for many members. As another example, the strategic group members share a common destiny to which all members contribute - the sale of motor vehicles in domestic or export markets - that shapes their investment, structures, strategies and returns. Thus, although a handful of large German automotive producers did not participate in the study, members of their strategic groups did. This is important because, using hierarchical linear modelling, Short, Ketchen, Palmer, and Hult (2007) recently found that *strategic groups have a much stronger impact on firm performance than industry*.

It seems reasonable to conclude that excluding very large automotive manufacturer industry firms does not limit the comparability of the South African and German samples too severely, even if the German sample excludes major automobile producers. This is because the industry is precisely defined to include automotive manufacturing industry firms and both samples include representatives of strategic groups that include the automobile producers.

Although limiting the research to participants in a defined industry is a useful way to enhance comparisons across different institutional contexts, it also presents a limitation in that the results may not generalise to other industries. Similar limitations arise through the restriction of the primary research to two geographical and cultural environments, namely South Africa and Germany. This suggests the potential for extending this research to other industrial, institutional, and geographic contexts.

Reliance on informant reports by employees and managers is another limitation. Although multiple informants were sought in each company and extensive steps were taken to ensure informants were selected by the senior marketing manager for their competence to respond to the questions (before and after survey administration), informant reports may be susceptible to perceptual, attitudinal, informational, or knowledge differences that can bias

responses and impact on reliability and validity. Future research efforts could benefit from a larger number of respondents per company, multiple measures of some of the constructs, as well as from using more objective data sources, such as archival or financial records. Collecting data in a manner that would facilitate hierarchical linear modelling would be ideal.

Two general lines of future research seem to be the next logical step and could yield highly interesting results. The one includes the extension of the research environment in order to support the generalizability of the findings; the other is to broaden the nomological model.

The scope of the present study somewhat limits the generalizability of the findings. A number of factors could provide further insight in the topic if included in continuative research. Firstly, although the two countries under investigation were carefully chosen for their cultural as well as socio-economically distinctiveness, which supports the generalizability of the findings, an extension of the study to a greater number of countries would offer an opportunity to confirm the findings and generate a universally valid model. Both the values, and the social axioms construct, were tested in a great variety of countries and among different groups of respondents (cf. Schwartz, 1992, 1994a, 1999, 2003a; Bond et al., 2004). Therefore using these scales ensures a high degree of comparability of the resulting findings. The inclusion of countries that differ greatly in terms of their cultural characteristics could particularly result in new insights.

One of the five social axioms levels, *fate control*, did not perform well enough in the specific research environment to be included in the analysis, although this was not entirely surprising, as previous research supported this. Possible reasons for this behaviour are discussed in the previous chapters. Even though the factor has been labelled as 'problematic' (Leung & Bond, 2004), findings related to *fate control* could have provided valuable insight and completed the nomological model of culture and market orientation.

Social axioms are important, scientifically useful culture descriptors. While their belief component adds additional predictiveness of behaviours, they are able to explain

interrelations between market orientation and culture in EMs that cannot be explained by values. However, the social axiom study is a relatively new instrument and is therefore still undergoing a continuing development process.

Valid measurement is a cornerstone of cross-cultural research as a science. While measurement instruments have greatly improved in recent years, systematic error often goes undiscovered. Particularly content-irrelevant factors, i.e. response styles, often influence results of questionnaire surveys (Baumgartner & Steenkamp, 2001, 2006). The instruments and scales used in the present study were chosen for their successful application in previous research. In doing so, it was of special interest that the instruments performed reliably in both the HIC context and EMs. Nevertheless, known problems with some items and factors were accepted, since the benefits significantly outnumbered the problems and no applicable alternative scales were available. Conducting the present research, it became evident that it would be especially advisable for the EM environment to adjust the measurements according to specific institutional and cultural requirements. While it is encouraging that the SAS generally works well in South Africa, the developers of the instrument might be well advised to review the scale and continue work to refine the concept.

Researching the effects of culture on the relationship between the antecedents of market orientation and market orientation in other countries would not only allow the inclusion of the fifth social axiom dimension, but also additional intervening variables. These might include factors such as *Confucian culture* in Asia, or *ubuntu*, an important construct in African countries, which is characterized by attributes such as caring and community, harmony, respect, responsiveness, humility and hospitality (Mangaliso, 2001).

Extreme response style (ERS) is an important threat to the validity of survey-based research (e.g. Baumgartner & Steenkamp, 2001; Greenleaf, 1992; Johnson, 2003) particularly since it affects both the mean level of responses and the correlation between constructs. In a recent study De Jong, Steenkamp, Fox and Baumgartner (2008) report substantive results

about the effects of socio-demographic and national-cultural variables on ERS. The authors reason that specifically in cross-national research, country-specific variations in ERS might be misinterpreted as substantive differences in the examined constructs or relationships, and identify culture as a major driving force of country differences in ERS. Therefore, future cross-national research should consider the effects of ERS.

In addition to the four antecedents of market orientation that were investigated in the present study, other top management, interdepartmental and organizational factors, as reviewed by Kirca et al. (2005), should be included to give a more detailed picture of the interaction-effects of culture. This also includes *formalization*, a feature of organizational systems that was excluded from the analysis in this study due to problems with the measurement scale.

This study uses a combination of behavioural and philosophical-cultural elements to conceptualize and measure market orientation. Whether defined as a corporate culture, where market orientation is described as consisting of the three behavioural components customer orientation, competitor orientation, and interfunctional coordination (Narver & Slater, 1990), or emphasising the development and execution of business strategy as the key organizing focus of market orientation (Ruekert, 1992), recent research indicates that the separate components of market orientation can behave differently in connection with their antecedents and consequences and should therefore be treated as distinct constructs (Gatignon & Xuereb, 1997; Lukas & Ferrell, 2000; Gao, Zhou & Yim, 2007). Looking at market orientation studies in EMs such as the work of Gao et al. (2007), a disaggregated view of market orientation as proposed by Gatignon and Xuereb (1997) could yield interesting information, especially in turbulent markets coined by high levels of uncertainty, as they are present in EMs. Gao et al. (2007) found for instance that unlike a competitor orientation, the effects of customer and technology orientations on business performance are non-monotonic and can be contingent on the competitive environment. As mentioned before, to date, research on market orientation

has been conducted mainly in Western HICs, leaving the generalizability and boundary conditions of consolidated findings an open issue for other settings, such as LICs or EMs. Insight on which strategic orientations organizations in such difficult environments should focus could be gained by adopting the above-described disaggregated view of the market orientation construct and testing the contingency perspective of organizational strategy (cf. Ginsberg & Venkatraman, 1985) in EMs.

There is a small body of research investigating the effects of culture on the consequences of market orientation. The effects on the market orientation-performance link have been the main subject of study. In order to broaden the nomological network by investigating cultural aspects, there should also be a focus on the consequences of market orientation. Researchers report culture's influence on individual work behaviour, which in turn affects performance (e.g. Schein, 1985; Steers & Porter, 1991). More directly, Hofstede's (2001) dimensions of national culture, *power distance* and *uncertainty avoidance*, are reported to affect the relationship between market orientation and performance (Kirca et al., 2005). Researchers are encouraged to focus on newer concepts to explain culture, such as social axioms (Leung et al., 2002), and relate these to the consequences of market orientation.

For some specific research environments, there is a need to adjust measurement instruments. The scales measuring the market orientation construct also need adjustment to the local context. For instance, if applied in different kinds of industries, not all measures of market orientation and its antecedents might apply (cf. Burgess & Nyajeka's 2005 study of Zimbabwean retailers). In addition, negatively worded items lead to falsified results when applied in EMs (e.g. Steenkamp & Burgess, 2002; Wong et al., 2003), an effect also witnessed in the present study. Therefore, there is a need to adjust existing measurement instruments or to develop new scales that fit to the particular research environment.

In addition to expanding the research to different cultural environment in order to increase the generalizability of the findings of a study, testing the theory in different industries

would also lead to new insight. As reported by Cano et al. (2004), there are differences in the relationships among the separate factors of the market orientation constructs when measured in different environments. In particular, the authors found the market orientation-performance link differs for profit and non-profit organizations, as well as for service and manufacturing companies. The present research setting presented an especially stringent context for testing the described relationships, namely the automotive industry. As discussed in the literature section, the automotive industry has certain characteristics that differ greatly from those observed in other processing and manufacturing industries. In particular, automotive suppliers face different kinds of competition and demand scenarios, since these are mainly controlled by few buyers, namely the automotive manufacturers.

Therefore, researchers should extend the research environment to other industries, such as the service industry or the non-profit sector, in order to increase the generalizability of the model, including culture as a moderator to the antecedents of market orientation-market orientation link.

This dissertation offers insight into the important effects culture has on the nomological framework of market orientation. Previously discovered relationships between market orientation and its antecedents were confirmed in new environments and meaningful new correlations were added, broadening the body of knowledge from both the cultural and the organizational point of view. While contributing in an interdisciplinary manner to the marketing and social psychology knowledge base, the present work also poses new questions and offers the basis for researchers to break new ground.

6 REFERENCES

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7 APPENDIX

Table 30

List of Participating Companies^a

Germany
AURORA, Konrad G. Schulz GmbH & Co. KG
BERU AG
BÖGRA Technologie GmbH
Dürr Ecoclean GmbH
EDAG GmbH & Co. KGaA
Gebrüder Ahle GmbH & Co.
Gutbrod Stanz- und Umformtechnik GmbH
Irmscher Automobilbau GmbH & Co. KG
L'Orange GmbH
MBN Maschinenbaubetriebe Neugersdorf GmbH
MTU Friedrichshafen GmbH
MVI SOLVE-IT GmbH
SKF GmbH
Thielert AG
Valeo Schalter & Sensoren GmbH
Würth Industrie Service GmbH & Co. KG

^a Only companies that are included in the analysis are listed.

Figure 13
Geographic Distribution of German Companies

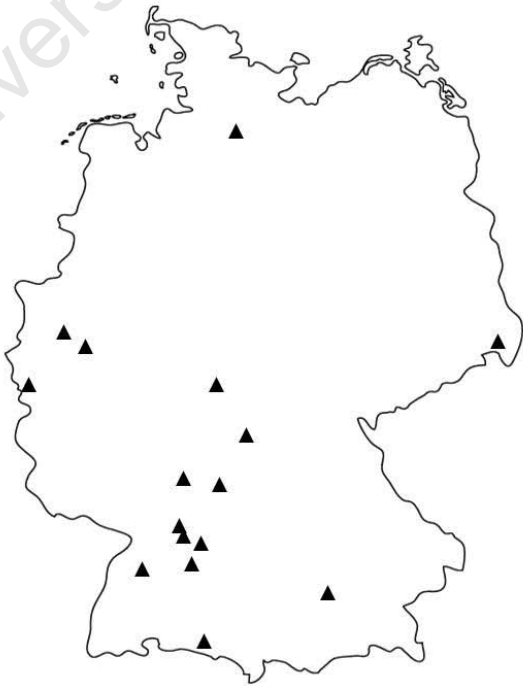


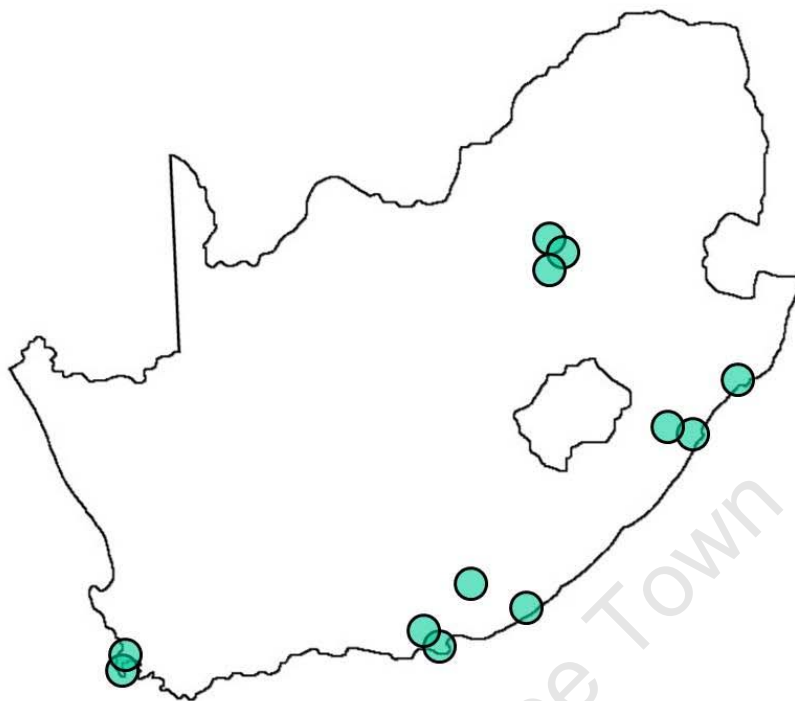
Table 31List of Participating Companies^a

South Africa	
Anton Die Makers cc	MTU South Africa (Pty) Ltd
Atlantis Forge (Pty) Ltd	NCS Resins (Pty) Ltd
Autoliv Southern Africa	Nissan Diesel South Africa (Pty) Ltd
Babcock Fabrication	Oleochemicals Manufacturing
Bell Equipment	Omniflex
BMW (South Africa) (Pty) Ltd	PFK Electronics Pty Ltd
Cellsecure	Phoenix Power Cables (Pty) Ltd
CME Foundry	Plastamid (Pty) Ltd
Control Instruments Automotive	Power Plastics
Donaldson Filtration Systems	Ramsay Engineering (Pty) Ltd
Dorbyl Automotive Technologies	Rheem South Africa
Duram Automotive	Sasol Oil
Eissmann Automotive South Africa (Pty) Ltd	Senmin
Eveready Pty Ltd	Smiths Manufacturing (Pty) Ltd
Feltex Automotive Trim	Spazio Lighting (Pty) Ltd
Ford Motor Company of Southern Africa	Stateline Pressed Metals
Formex Engineering	Steelbank Merchants (Pty) Ltd
General Hinges & Aluminium Frames	Tenneco
General Motors South Africa (Pty) Ltd	Toyota South Africa
Gillet Exhaust Technologie (Pty) Ltd	Trident Steel (Pty) Ltd
Halberg Guss PTY Ltd	TRW Automotive
Hellermann Tyton (Pty) Ltd	TRW Occupant Restraints South Africa Inc
Hesto Harnesses	Universal Clips CC
Honda South Africa Pty Ltd	Volkswagen Group South Africa
I-Cube	Zealous group of companies
Legis Business Information Systems (Pty) Ltd	Zest Polyurethanes
Loadtech On Board Weighing CC	ZF Lemfoerder South Africa
Magna Mirrors SA	

^a Only companies that are included in the analysis are listed.

Figure 14

Geographic Distribution of South African Companies



University of Cape Town

Table 32

Complete List of Items in Questionnaire

	Label	Item	Used
Social Axiom Scale			
Social Cynicism	SC1	Powerful people tend to exploit others.	√
	SC2	Power and status make people arrogant.	√
	SC3	Kind-hearted people are easily bullied.	√
	SC4	Significant achievement requires one to show no concern for the means needed for that achievement.	
	SC5	Kind-hearted people usually suffer losses.	√
	SC6	Old people are usually stubborn and biased.	√
Reward for Application	RA1	One will succeed if one really tries.	√
	RA2	Adversity can be overcome by effort.	
	RA3	Every problem has a solution.	√
	RA4	Good deeds will be rewarded, and bad deeds will be punished.	√
	RA5	Hard working people will achieve more in the end.	√
	RA6	One who does not know how to plan his or her future will eventually fail.	√
Social Flexibility	SF1	One's behaviour may be contrary to one's true feelings.	√
	SF2	People may have opposite behaviour on different occasions.	√
	SF3	One has to deal with matters according to the specific circumstances.	√
	SF4	There is usually only one way to solve a problem.	
	SF5	Human behaviour changes with the social context.	√
	SF6	There are phenomena in the world that cannot be explained by science.	
Fate Control	FC1	Individual characteristics, such as appearance or birthdate, affect one's fate.	
	FC2	Good luck follows if one survives a disaster.	
	FC3	Fate determines one's successes and failures.	
	FC4	There are certain ways to help us improve our luck and avoid unlucky things.	
	FC5	There are many ways for people to predict what will happen in the future.	
	FC6	All things in the universe have been determined.	
Religiosity	SP1	Belief in a religion helps one understand the meaning of life.	√
	SP2	Belief in a religion makes people good citizens.	√
	SP3	Religious faith contributes to good mental health.	√
	SP4	There is a supreme being controlling the universe.	√
	SP5	Religious people are more likely to maintain moral standards.	√
	SP6	Religion makes people escape from reality.	
Portrait Value Questionnaire ^a			
Power	POW2	It is important to him to be rich. He wants to have a lot of money and expensive things.	√
	POW1	It is important to him to get respect from others. He wants people to do what he says.	√
Achievement	ACH1	It's important to him to show his abilities. He wants people to admire what he does.	√
	ACH2	Being very successful is important to him. He hopes people will recognise his achievements.	√
Hedonism	HED1	He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.	√
	HED2	Having a good time is important to him. He likes to "spoil" himself.	√
Stimulation	STI1	He likes surprises and is always looking for new things to do. He thinks it is important to do lots of different things in life.	√
	STI2	He looks for adventures and likes to take risks. He wants to have an exciting life.	√

Self Direction	SEL1	Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	√
	SEL2	It is important to him to make his own decisions about what he does. He likes to be free and not depend on others.	√
Universalism	UNI1	He thinks it is important that every person in the world should be treated equally. He believes everyone should have equal opportunities in life.	√
	UNI2	It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.	√
	UNI3	He strongly believes that people should care for nature. Looking after the environment is important to him.	√
Benevolence	BEN1	It is very important to him to help the people around him. He wants to care for their well-being.	√
	BEN2	It is important to him to be loyal to his friends. He wants to devote himself to people close to him.	√
Tradition	TRA1	It is important to him to be humble and modest. He tries not to draw attention to himself.	√
	TRA2	Tradition is important to him. He tries to follow the customs handed down by his religion or his family.	√
Conformity	CON1	It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	√
	CON2	He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	√
Security	SEC1	It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.	√
	SEC2	It is important to him that the government ensures his safety against all threats. He wants the state to be strong so it can defend its citizens.	√
Antecedents of Market Orientation Scale			
Centralization	CENT1	There can be little action taken here until a supervisor approves a decision.	√
	CENT2	A person who wants to make his own decision would be quickly discouraged here.	√
	CENT3	Even small matters have to be referred to someone higher up for a final answer.	√
	CENT4	I have to ask my boss before I do almost anything.	√
	CENT5	Any decision I make has to have my boss' approval.	√
Reward System Orientation	REW1	No matter which department they are in, people in this business unit get recognized for being sensitive to competitive moves.	√
	REW2	Customer satisfaction assessments influence senior manager's pay in this business unit.	√
	REW3	Formal rewards (i.e., pay raise, promotion) are forthcoming to anyone who consistently provides good market intelligence.	√
	REW4	Salespeople's performance in this business unit is measured by the strength of relationships they build with customers.	√
	REW5	Salespeople's monetary compensation is almost entirely based on their sales volume.	√
	REW6	We use customer polls for evaluating our salespeople.	√
Formalization	FORM1	I feel that I am my own boss in most matters.	√
	FORM2	A person can make his own decisions without checking with anybody else.	√
	FORM3	How things are done around here is left up to the person doing the work.	√
	FORM4	People here are allowed to do almost as they please.	√
	FORM5	Most people here make their own rules on the job.	√
	FORM6	The employees are constantly being checked on for rule violations.	√
	FORM7	People here feel as though they are constantly being watched to see that they obey all the rules.	√
Interdepartmental Conflict	CONF1	Most departments in this business get along well with each other.	√
	CONF2	When members of several departments get together, tensions frequently run high.	√
	CONF3	People in one department generally dislike interacting with those from other departments.	√
	CONF4	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	√
	CONF5	Protecting one's departmental turf is considered to be a way of life in this business unit.	√

Willingness to Take Risks	CONF6	The objectives pursued by the marketing department are incompatible with those of the manufacturing department.	√
	CONF7	There is little or no interdepartmental conflict in this business unit.	√
	RISK1	Top managers in this business unit believe that higher financial risks are worth taking for higher rewards.	√
	RISK2	Top managers here accept occasional new product failures as being normal.	√
	RISK3	Top managers in this business unit like to take big financial risks.	
	RISK4	Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail.	√
	RISK5	Top managers in this business unit like to "play it safe."	√
	RISK6	Top managers around here like to implement plans only if they are very certain that they will work.	√
Market Orientation Scale			
Insight	INS1	We listen to what our customers have to say.	√
	INS2	We use the information we have on customers to improve quality.	√
	INS3	The organization's objectives are based on customer's needs.	√
	INS4	The customer information we have is used to develop strategy.	√
	INS5	We use market research information in managing our products.	
	INS6	In our organization, market research is used to divide markets into groups.	
	INS7	We obtain ideas from customers to improve our products.	
Intent	INS8	Our people who deal with customers have information on customers and competitors.	√
	INS9	Within this organization, we listen to customer input when developing new products.	√
	INTE1	We develop specific plans for target market segments (groups).	√
	INTE2	We have the money, time, skill and other resources we need to improve our position in the market.	√
	INTE3	In our organization, beating the competition is more important than financial performance.	
	INTE4	The prices we charge are determined by how much a product is worth to the customer.	
	INTE5	We focus on markets where we have competitive strength.	
Interaction	INTE6	We are prepared to invest in order to improve our position in the market.	√
	INTE7	Customers and their needs are a more important part of our planning than products or product groups.	
	INTE8	Within this organization, we decide on strategies after reviewing market research.	√
	INTER1	We keep the promises we make to customers.	√
	INTER2	We respond to customer needs when quoting prices or bidding projects.	√
	INTER3	When we write contracts we make sure we are responding to customer needs.	√
	INTER4	We respond to customer needs in creating terms of sale.	√
Performance Measure	INTER5	Our credit policies take customer needs into account.	√
	INTER6	We make sure we deliver on time to take care of customer needs.	√
Business Performance			
Business Performance	PROFIT	Profitability trend over the last three years.	√
	SIZE	Size compared to largest competitor	
	SHARE	Market share trend during the past three years.	√
	TURNOVER	Sales turnover trend (growth) during the last three years.	√

^a Male version

Document 1

Letter of Reference - VDA

VDA | Verband der
Automobilindustrie

VDA Verband der Automobilindustrie e.V. · Postfach 176583 · 60079 Frankfurt/Main

Westendstraße 61
60325 Frankfurt/Main
Tel. +49 (0) 69 / 9 75 07-0
Fax +49 (0) 69 / 9 75 07-2 61
info@vda.de
www.vda.de

An ausgewählte
Unternehmen der
Automobilindustrie in Deutschland

Ihr Zeichen/Ihre Nachricht vom

Unser Zeichen
wei/sims

Durchwahl
-257

Mail-Adresse
weirich

Datum
29.01.2008

Referenzschreiben

Sehr geehrte Damen und Herren,

Herr Tobias Greß, Doktorand an der Graduate School of Business der Universität Kapstadt, führt im Rahmen seiner Dissertation eine Studie zur Marktorientierung bei südafrikanischen und deutschen Unternehmen der Automobilindustrie durch. Im Mittelpunkt stehen die Einflüsse der kulturellen Prägungen der Mitarbeiter auf dem Grad der Marktorientierung.

Der VDA möchte die Durchführung dieser Studie unterstützen und empfiehlt seinen Unternehmen, sich an der Befragung zu beteiligen.

Wir wünschen Herrn Greß viel Erfolg bei seiner Dissertation und freuen uns auf die Ergebnisse.

Mit freundlichen Grüßen

VERBAND DER AUTOMOBILINDUSTRIE

i.V.



Dr. Kunibert Schmidt



Helmut Weirich

Dresdner Bank
BLZ 500 800 00
Kto.-Nr. 971 893 00
Swift-code: DRESDEFF
IBAN: DE695008 000 000 87189300

Deutsche Bank
BLZ 500 700 10
Kto.-Nr. 965 335 00
Swift-code: DEUTDEFF
IBAN: DE335007001 000 96533500

Postbank Frankfurt
BLZ 500 100 60
Kto.-Nr. 4611-602
Swift-code: PBNKDEFF
IBAN: DE575001006 0000 4611602

USt-IdNr. DE114108668
Steuer-Nr.: 04722427139 FA Frankfurt/M.

Document 2

Cover Letter - UCT

Breakwater Campus | Portwood Road | Greenpoint
University of Cape Town | Private Bag X3
Rondebosch | 7701 | Cape Town | South Africa

PROFESSOR STEVEN MICHAEL BURGESS
Research Director and Professor of Business Administration in
Marketing
Email: sburgess@gsb.uct.ac.za



Friday, 18 April 2008

Project SAS – South African Research Phase

Researchers at the University of Cape Town (UCT) Graduate School of Business and St. Gallen Executive School in Switzerland (a leading European business school) are conducting research on South African and German manufacturers. The research is designed to help manufacturers understand how to improve financial and nonfinancial performance.

Top German and South African industrial firms are participating in this study and we are hoping that you will join them.

The study is a “world first” in many respects. The results will help South African manufacturers identify strategies that are appropriate for the South African context, as compared to high income countries.

As a corporate participant, you will receive an Executive Summary that will help you benchmark against South African and German participants and understand the results.

There is no charge to participate in the study except your time. Almost all of the first 150 participants completed the online survey in 15-18 minutes.

It is very important that more than one person participates within each company. The typical manufacturer participating in this research has put forward 5-8 people. A sampling across different departments or positions will allow us to achieve the most reliable and valid results. Your responses will be private and held in strict confidence. You will not be asked to divulge competitively sensitive information.

Your participation is very important because your company was identified as exactly the kind of firm we hope to help. *Please forward this document to the 5-8 people within your company who would be able to participate in the survey. The survey is available online at the following address:* http://www.unipark.de/uc/ch_sg_uni_zbm_stud/6b2b/

Thank you for sharing your time to consider participating, which we sincerely appreciate. If you should have any doubt about the validity of this letter, please feel free to call Cathy Taffinder, Faculty Secretary, at the UCT Graduate School of Business, on 021-406-1911.

Kind regards

A handwritten signature in black ink, appearing to read 'S. Burgess'.

Professor Steven Michael Burgess
Professor of Business Administration in Marketing and Research Director

UNIVERSITY OF CAPE TOWN

www.gsb.uct.ac.za
